

American Vegetable Grower

FEBRUARY • 1956



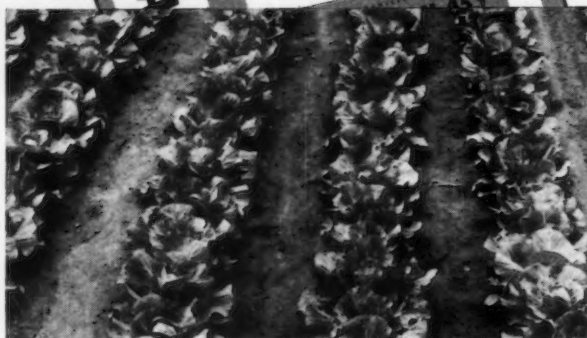
Big, Early Tomatoes • New Planters • Fertilizer Tips



MORE *Growth* PER BAG

than any other nitrogen fertilizer

Vegetables are heavy feeders on nitrogen, and powerful ARCADIAN® UREA 45 makes light work of supplying this nitrogen growing power. Every 80-pound bag of UREA 45 supplies 36 pounds of nitrogen—the most nitrogen per pound you can buy in a bag. UREA 45 is pelleted urea nitrogen, quick-acting and long-lasting.



Cool-weather vegetables need plenty of quickly-available nitrogen for fast growth that makes profitable yields. UREA 45 dissolves quickly in soil moisture to feed crops fast. It stays locked to soil particles to provide nitrogen steadily, whether your crop has a short or a long growing season.



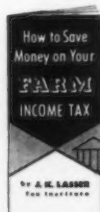
Warm-weather crops demand nitrogen in large doses. Concentrated UREA 45 supplies all the nitrogen needed in one easy trip across the field. It works equally well as a labor-saving nitrogen side-dressing. Any UREA 45 left in the soil after harvest stays in place to rot down crop residues and to feed the next crop.



Long-season vegetables, including root crops, require plenty of nitrogen through months of growth. ARCADIAN UREA 45 feeds crops well any way you use it: plowed down, disked in, side-dressed, or added to irrigation water. Leach-resistant UREA 45 stays in the root zone where crops can reach it.



You save labor and feed your crops well, any way you apply UREA 45. One of the easiest ways to provide crops with nitrogen is to add UREA 45 to irrigation water. It reaches all the crop roots that the water reaches and leaves no harmful soil residues. Get UREA 45 now—it's a labor-saver and a profit-maker!



FREE: Income Tax Booklet

Without obligation, get your free copy of the J. K. Lasser booklet: "How to Save Money on Your Farm Income Tax." Write **TAX BOOK** and your name and address on a postcard and mail it to us.

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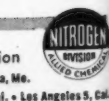


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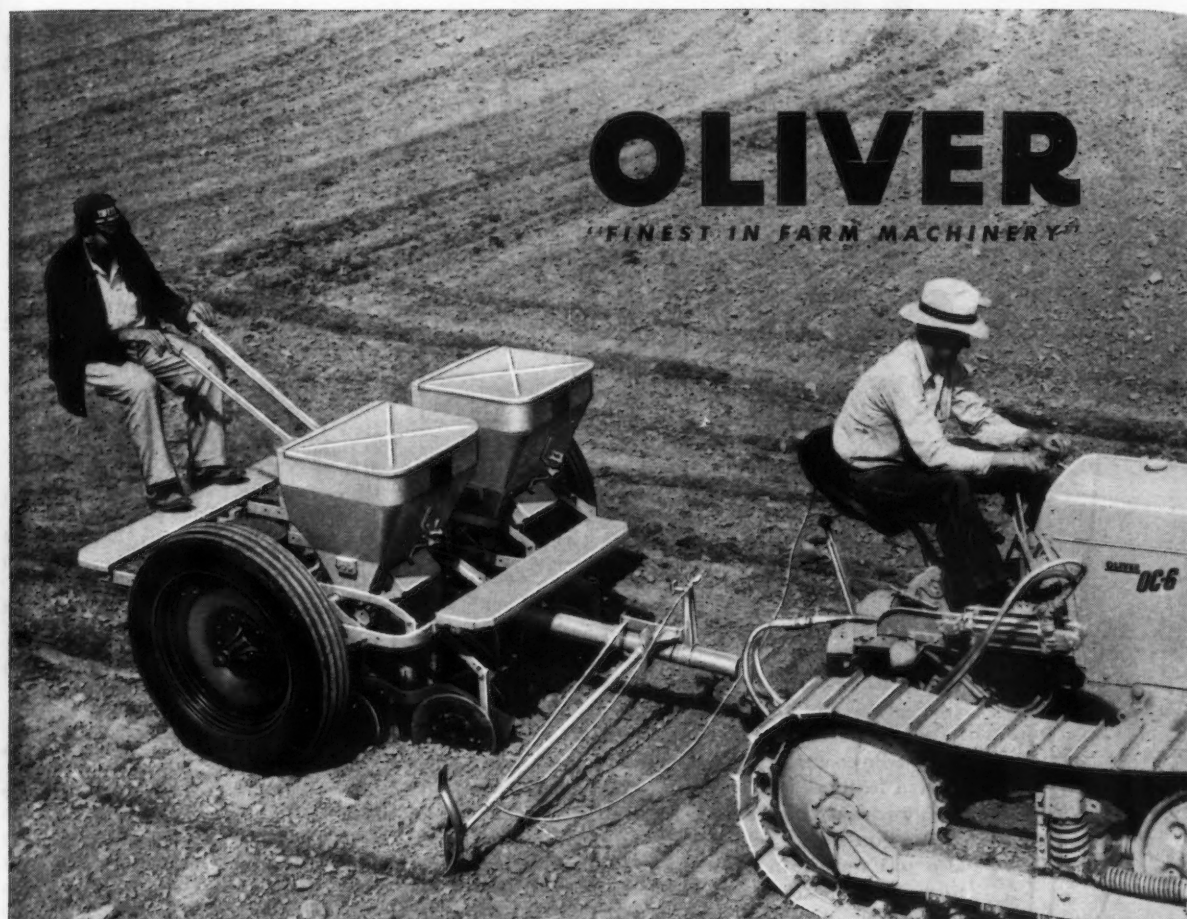
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OLIVER

"FINEST IN FARM MACHINERY"

The precision planter and the sure-footed Oliver OC-6 crawler tractor. Planter available in 2- or 4-row models...as a vegetable or potato planter.

How Iron Age Planters boost quality

- ☆ Uniform depth assures even maturity
- ☆ Regular seed spacing aids full growth
- ☆ Bandway fertilization builds drought resistance
- ☆ Seeding rates match all soil and crop needs

Here are four big reasons why quality and yield are both better when you plant your vegetables with an Oliver Iron Age Planter. Some other planters have some of these practical advantages...no other planter has them all.

Unit design of the Iron Age Planter gangs assures uniform planting depth in all soil conditions. The gang for each row floats independently with compression-spring down pressure. All seeds germinate at the same time...mature evenly...can be harvested at the peak of quality.

Bandway fertilization encourages deep rooting, reduces the hazards of drought. Your choice of Hi-Lo or uniform depth of fertilizer placement lets you put the plant food where it will bring your biggest yields. Big 300 to 400 pounds fertilizer capacity per row with belt-type distributor assures accurate measurement and fewer stops for refilling.

Superaccurate Cole "double seed hoppers" provide extra versatility...wide range of seed spacings...no skips, no bunching.

Switch to a new Oliver Iron Age Vegetable Planter and launch your quality building plan today.

The Oliver Corporation
400 West Madison Street, Chicago 6, Illinois



New 12 Speed CASE "300" 3-plow

Sets a New Trend in Tractor Design

Daringly different from hood to hitch . . . dazzling in beauty . . . dynamic in performance . . . the Case "300" brings to life your dream of an ideal 3-plow tractor. Its Tripl-Range transmission with 12 speeds forward . . . $\frac{3}{4}$ of a mile per hour up to 20 . . . plus three reverse . . . give you versatility never before achieved in extra-heavy tillage, cultivation or road travel.

New Powr-Torq engines for the fuel you prefer pull normal loads at half throttle if desired . . . unusually high torque at two-thirds of rated engine speed enables you to go through tough spots without shifting. There also is Cam-and-Lever steering with today's shortest turning . . . duo-control Safety-Lock hydraulics . . . "Tell-Easy" instrument panel with eight separate indicators . . . 3-point Eagle Hitch with stabilized depth control . . . Constant PTO with separate traction clutch . . . and Powr-Shift rear wheels . . . all with controls where you expect to find them.

New Powr-Torq Engines
... Gas, LPG, Distillate, Diesel



General Purpose or Utility Models

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American VEGETABLE GROWER

REG. U. S. PAT. OFF.
(Commercial Vegetable Grower)

Vol. 4 February, 1956 No. 2

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Get better stands, yields, quality and profits

with **Agri-mycin[®] 100**

- Antibiotic seed-piece dip for potatoes
- Spray for vegetable crops

Blackleg and Soft Rot controlled

Yields increased up to 72 bu. per acre

ECONOMICAL, FULLY COMPATIBLE WITH MOST STANDARD FUNGICIDES

Agri-mycin is the one antibiotic plant spray that gives you two-way crop protection—two-way benefits. Not only does it control some of the most stubborn and destructive plant diseases—it promotes healthy, vigorous plants, thus increasing yields. Universities and commercial growers have reported up to 72 bushels per acre increase in potato crop—10,000 lb. per acre increase in tomato yield with Agri-mycin. Crop is of a better quality, brings a better price. Agri-mycin is fully compatible with fungicides such as Spergon, Phygon, Captan, Nabam, Ferbam. It is recommended for use in combination potato seed piece dip treatments for combined control of both bacterial and fungal diseases. Agri-mycin 100, the *only* spray containing both streptomycin and Terramycin[®] is now available from your regular supplier of spray materials.

*Pat. Pending

*Terramycin Brand of Oxytetracycline



Vegetable growers!

Write for information on use of Agri-mycin
in control of above diseases.

9.34-oz. jar makes up to 330 gallons
of spray or dip. Save over 20%, buy
it in the economical 25-lb. drum.

Pfizer



Only 1 peck of rots in 10,000 lbs. potatoes

Chas. Blackman, commercial potato grower of Clark, S. D., reports that Agri-mycin kept his field free from disease even though fields across the road were severely blighted. He says that Agri-mycin has also eliminated soft rot in potatoes stored in pits over winter.

MAIL COUPON TODAY!

Chas. Pfizer & Co., Inc.
Dept. AVG-2
Brooklyn 6, N. Y.

Please send me the name of my nearest distributor or dealer
and additional information on Agri-mycin.

Name _____

Address or Rural Route _____

City _____ State _____

Vegetable crop _____ No. of acres raised _____

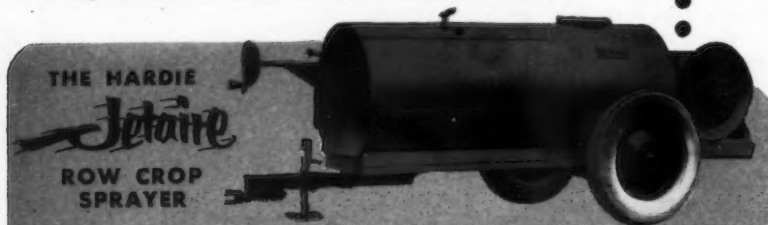


ROW CROP ATTACHMENT!

Now you can convert your high pressure row crop sprayer to a 2-fan air blast unit for concentrate or dilute spray application. This new Hardie 2-fan Jetaire Row Crop Attachment gives you the same unmatched performance in Row Crop Pest Control as the famous Hardie Jetaire 2-fan Air Blast Row Crop Sprayer. Ask your Hardie dealer to show you this wonderful new unit. Write for catalog.

COMES COMPLETE

- Equipped with 2, 26 in. axial fans.
- The reversible housing can be rotated through 220 degrees by tractor seat controls—sprays on either side.
- Adjustable vanes provide easy direction control.
- Delivered ready to run with everything needed for installation on sprayers with either wood or steel tanks.
- Easily dismantled when not in use. Attractive low price.



Air Blast and High Pressure Sprayers,
Dusters, Irrigation Systems.

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PEST CONTROL EQUIPMENT

SOLD AND SERVICED

Ask your dealer.

The Hardie Jetaire is the only 2-fan air blast row crop sprayer. Its performance in big volume row crop pest control has established unmistakably that 2 fans are better than one in a row crop sprayer, as well as in fruit tree sprayers. Leading row crop growers all over America are finding new ease, speed, economy and efficiency in pest control with the 2-fan Jetaire. Write for complete data.

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1435 N. W. Northrup St., Portland 9, Oregon
In Canada, C. W. Lewis & Son, Ltd., Grimsby, Ont.
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LETTERS TO THE EDITOR



Potato Storage

Dear Editor:

After reading your article on potato storage in the November issue, I thought you might be interested in a picture of our storage (shown above), built in 1953.

The overall dimensions are 40x100 feet. This includes a grading division which is built up to truck level for loading. The front part is the storage, that being 40x60. The little room built on front is the fan room. From there, air is forced into floor ducts throughout the storage. In a little room to the right is our cutting room in which bins have been built so the potatoes may be dumped from the storage into the bins for cutting.

The exterior is of waylite block. The overhead folding doors are of aluminum. This has proved very satisfactory and convenient.

Elmer, N.J.

Warren Smith and Son

Horseradish Growers

Dear Editor:

I was surprised to see four of the largest horseradish growers in central Jersey omitted from your list (Answering Your Questions, December, 1955). These names are: J. S. Kucowski, R. D. No. 1, Wrightstown (30 acres); Walter Guzikowski, R. D. No. 1, Wrightstown (45 acres); E. H. Gancarz, R. D. No. 1, Wrightstown (80 acres); and Alex Lyczak, R. D. No. 1, Yardville (20 acres).

The acreage is based on the 1954 crop. We grow the old reliable Bohemian Purple top root. And some roots weigh as much as 4 pounds.

If possible, I would like to trade some of my sets for the variety grown in the Middle West.

Wrightstown, N. J.

J. S. Kucowski

Disappearing Farm Lands

Dear Editor:

I read with interest the Letter to the Editor about zoning farm lands as a solution to the problem of what to do about our fast disappearing farm lands. Even the government is worried about it.

I read a write-up of a speech by Donald A. Williams, head of the USDA's Soil Conservation Service, who warned about the danger of a million acres of cultivable land going into non-agricultural use every year. He said that during the last 15 years about 17 million acres of our flattest and most fertile farm lands have been converted to non-agricultural use.

Thinking people seem to be disturbed about this problem, but warnings do not solve it. Let's do something constructive to prevent our farm lands from disappearing. To quote another writer, "Are we sawing off the limb we're sitting on?"

Washington, D.C.

William A. Boyd

AMERICAN VEGETABLE GROWER

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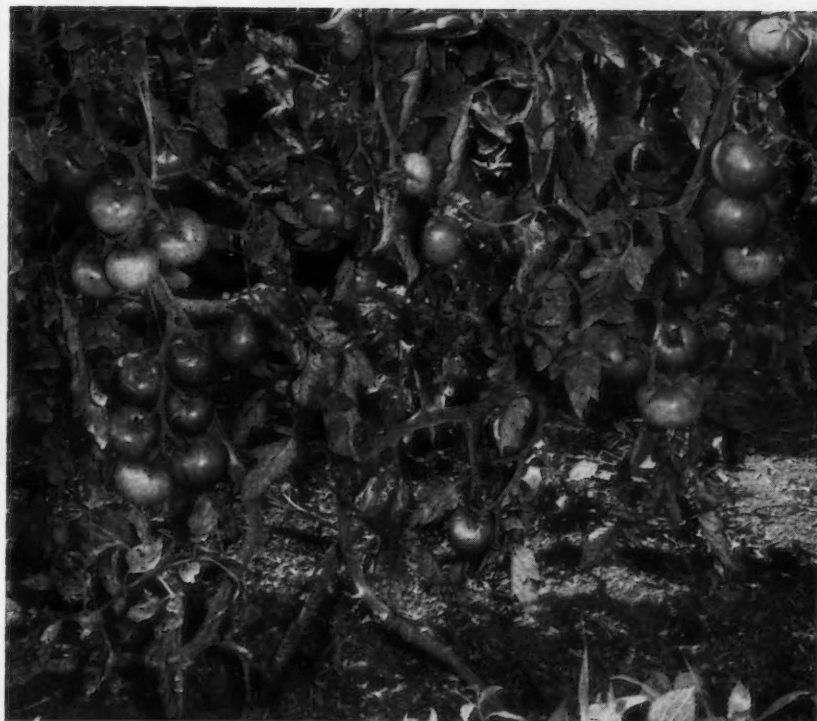
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LE GROWER



BIRD VITA-BANDS[®] *speed your plants to early market profits*

The grower who catches the high-priced early market winds up the season with the biggest profits. That's been proved season after season. Bird VITA-BANDS get you there first!

VITA-BAND "D", the unique nutrient-treated, *disintegrating plant band*, controls root growth for short growing periods. Grower controls penetration of root growth through band by cracking it at time of transplant. Band then disintegrates in the soil.

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VITA-BAND "10", nutrient-treated, aids plant growth from seedling through time of transplant. At that time, this band is removed, and with normal handling, compact healthy rootball is set without transplant shock.

HIGHER NET PROFITS result because crop handling is more economical, plants are healthier and mature earlier.

Order from supplier's catalogue or write direct for information and name of nearest distributor. Bird & Son, inc., Horticultural Dept. AV-2, East Walpole, Massachusetts.

BIRD



VITA-BANDS • TOM THUMB FLATS
VITA-POTS • RED POTS
PERENNIAL POTS • VITA-M POTS

| QUANTITIES — WEIGHTS — PRICES | | | | | | | | | |
|-------------------------------|----------------------|--------------|--------------|------------|-----------|-------------|-----------|-----------|-----------|
| | SIZES | 1½x1½ x2½ | 1½x1¾ x2½ | 2x2 x2½ | 2x2 x3 | 2½x2½ x3 | 3x3 x3 | 4x4 x3 | 4x4 x4 |
| VITA- BAND 10 | QUANTITY PER CASE | 2M | 2M | 2M | 2M | 2M | 1M | 500 | 500 |
| | WEIGHT PER CASE | 33 LBS | 36 LBS | 42 LBS | 51 LBS | 63 LBS | 37 LBS | 25 LBS | 33 LBS |
| | PRICE PER M | 3.70 | 4.00 | 4.55 | 5.05 | 6.00 | 6.90 | 9.00 | 11.25 |
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| VITA- BAND D | QUANTITY PER CASE | 2M | 2M | 2M | 2M | 2M | 1M | 1M | 1M |
| | WEIGHT PER CASE | 21 LBS | 24 LBS | 27 LBS | 32 LBS | 41 LBS | 24 LBS | 32 LBS | 42 LBS |
| | PRICE PER M | 3.85 | 4.15 | 4.65 | 5.35 | 6.05 | 7.05 | 9.25 | 11.60 |
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| VITA- BAND H | QUANTITY PER CASE | | 1M | 1M | 1M | 500 | 500 | 500 | 500 |
| | WEIGHT PER CASE | | 26 LBS | 30 LBS | 36 LBS | 22 LBS | 26 LBS | 35 LBS | 46 LBS |
| | PRICE PER M | | 5.45 | 5.80 | 6.90 | 7.65 | 8.50 | 10.45 | 12.90 |
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Buyers now want a green celery that combines both big size and compactness. Tall Utah 52-70 meets that demand . . . and more . . . because it has:

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- Thick, rounded stems that are 9" to 11" long to joint.
- Tightly shingled, cylindrical heads with ideal girth.

- Darker green color with more waxy sheen than other Utah strains.

Profit more from the steady swing to green celery by planting Ferry-Morse Tall Utah 52-70. Cover your requirements now.

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Memphis • Harlingen • Tampa

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FEBRUARY,

CALENDAR OF COMING MEETINGS AND EXHIBITS

Feb. 2-3—Farm and Home Vegetable and Potato Growers Meeting, University of Wisconsin, Madison.—John A. Schoenemann, Ext. Veg. Crops Spec., Madison.

Feb. 6-7—Ohio Conference of Cannerymen, Fieldmen and Growers of Vegetable Crops for Processing, annual meeting, Ohio Union, Ohio State University, Columbus.—E. C. Wittmeyer, Ext. Hort., OSU, Columbus 10.

Feb. 7-10—Wisconsin Area Potato Growers meetings: Feb. 7 at Spooner, Feb. 8 at Rhineland, Feb. 9 at Antigo, Feb. 10 at Stevens Point.—John A. Schoenemann, Ext. Veg. Crops Spec., Madison.

Feb. 8—New Hampshire Vegetable Growers meeting, New Hampshire Highway Motel, Concord.—Perley D. Colby, Assistant County Agricultural Agent, Milford.

Feb. 9-10—Long Island Growers 24th annual convention, Polish Hall, Riverhead, N.Y.—Walter G. Been, 235 Griffing Ave., Riverhead.

Feb. 13-15—Ohio Vegetable and Potato Growers Association 41st annual meeting, Hotel Cleveland, Cleveland.—E. C. Wittmeyer, Sec'y, Horticultural Bldg., Columbus 10.

Feb. 14—Southeastern Wisconsin Area Potato Growers Meeting, Milwaukee County Agent's office, 9035A Watertown Plank Rd., Milwaukee.—John A. Schoenemann, Ext. Veg. Crops Spec., Madison.

Feb. 14—Indiana outdoor commercial vegetable growers meeting, Farm Bureau Co-operative Bldg., Indianapolis, 10 a.m.—F. C. Gaylord, Sec'y, Lafayette.

Feb. 15-16—Manistee and Benzie County Horticultural Society and Manistee and Benzie County Berry Growers' Association meeting, Manistee Armory, Manistee, Mich.—Ray Anderson, Chief, Mich.

Feb. 16-17—Steuben County (N.Y.) Potato Growers convention, Central School, Cohocton.—Ray Nichols, Sec'y, Bath.

Feb. 22-23—Lakeshore Area Wisconsin Vegetable Grower meetings: Feb. 22 at Milwaukee County agent's office, 9035A Watertown Plank Rd., Milwaukee; Feb. 23 at Wisconsin Gas and Electric Co. Auditorium, Racine.—John A. Schoenemann, Ext. Veg. Crops Spec., Madison.

Feb. 28-March 2—Iowa Fruit and Vegetable Schools: Feb. 28 at Davenport; Feb. 29 at Burlington; Mar. 1 and 2 at Council Bluffs.—C. L. Fitch, Sec'y, Ames.

Mar. 8-10—Watermelon Growers and Distributors Association annual convention, Roosevelt Hotel, New Orleans.—J. J. Parrish, Sec'y, Adel, Ga.

Mar. 12-16—Tenth National Conference on Handling Perishable Agricultural Commodities, Purdue University, Lafayette, Ind.—N. K. Ellis, Purdue U., Lafayette.

Mar. 19-20—Kern County Potato Growers Association 12th annual convention, Bakersfield Inn, Bakersfield, Calif.—Francis P. Pusateri, Exec. Sec'y, Bakersfield.

June 14-16—Idaho Shippers Association (including Malheur County, Ore.) annual summer convention, Sun Valley.—Edd Moore, Exec. Sec'y, P. O. Box 1100, Idaho Falls.

APPOINT ENTOMOLOGIST

MILLER Chemical & Fertilizer Corp., of Baltimore, Md., has announced the appointment of Robert C. Berry as Entomologist and Sales Representative. This position will bring him in close contact with the growers and cannerymen of the Delmarva peninsula, helping them with their pest control problems.

Berry was formerly with S. B. Penick & Company as supervisor of Penick's field development of insecticides. Prior to that, he was a Research Fellow in Entomology at the University of Delaware, and an instructor at the University of Maryland.

FEBRUARY, 1956

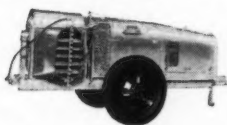
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AIR VOLUME
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for unequalled
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economy
with Myers
Concentrate
Sprayers**

Bigger, better yields . . . faster, more economical, more positive spraying . . . these are the benefits Myers new field-crop concentrate sprayers offer growers everywhere. And here are some of the product features that make them possible . . .

MORE POWER—Big 75-horsepower industrial engine drives double-centrifugal fans and a husky 20-gallon-per-minute Bulldozer pump that delivers 400 pounds pressure.

BETTER COVERAGE—26,000 cubic feet of air moving at 90 MPH effectively deposit spray droplets up to 50 feet away! But tender young plants are never damaged.

LOWER COST—With no heavy boom to handle, spraying requires fewer hours. Concentrate mixtures take less water. With no run-off, no expensive materials are wasted.



See the full line of Myers Concentrate sprayers and new boom rigs at your nearby Myers dealer.

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POWER SPRAYERS
WATER SYSTEMS
AND WATER SOFTENERS

Write today for "A Guide to Effective Concentrate Spraying", written by a qualified entomologist and power sprayer specialist. Write to: The F. E. Myers & Bro. Co., 8802 Orange Street, Ashland, Ohio. In Canada—The F. E. Myers & Bro. Co. (Canada) Ltd., Dept. 8802, Kitchener, Ontario.

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avoid serious soil insect damage on potatoes, vegetables and fruit



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Now—with a single application of powerful aldrin—you can control underground insect pests that threaten the life and quality of your vegetable crops.

Wireworms, white grubs, flea beetle larvae, strawberry root weevil grubs, cabbage maggots, rootworms, and other major soil pests breathe their last if they so much as touch, taste or smell aldrin. Yet aldrin does not affect the flavor, or leave a harmful residue when applied according to label instructions.

Aldrin is economical and easy to use, too. A small amount per acre does the job! You can broadcast it as a spray or dust . . . or include it in a fertilizer mix. It's effective in every form.



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FEBRUARY,

You Can Grow EARLY, BIG TOMATOES

by using

Sprays of "Sunshine"

By E. M. EMMERT

University of Kentucky

FOR several years hormone spraying for early set of fruit has proved to be valuable, especially under adverse weather conditions. However, the increases were not too large and the adverse weather conditions had to be rather severe in order for the increases to pay off. If weather conditions were favorable, it was a waste of effort to spray with hormones in many cases.

Recent work at the University of Kentucky has proved that at least some hormones can be activated by the use of boron. Increases were obtained that were considerably greater than when hormone alone was used.

Furthermore, early increases were obtained even if weather conditions were not so adverse, and total yields sometimes were upped as much as 30 to 40 per cent under many conditions.

Boron with beta naphthoxy acetic acid beyond a doubt stimulated increase in set and was outstanding in increasing fruit size. Parachlorophenoxyacetic acid was helpful in increasing set, but did not increase size to any significant extent. Another reason the beta acid was used was that it could be applied as an overall spray without injuring leaves and growing tips even with the boron activator.

The para acid without boron could be used successfully, but care had to be taken or growing tips would be injured; only blossoms must be covered. When boron was used with it, injury typical of 2,4-D injury occurred and was serious. In our plastic greenhouse, which is tighter than glass, the fumes spread in the air and caused damage to unsprayed plants as well as to sprayed ones.

Since beta acid can be used as an overall spray, it can be included with regular fungicide and insecticide

sprays. This makes application costs nil and increases the returns.

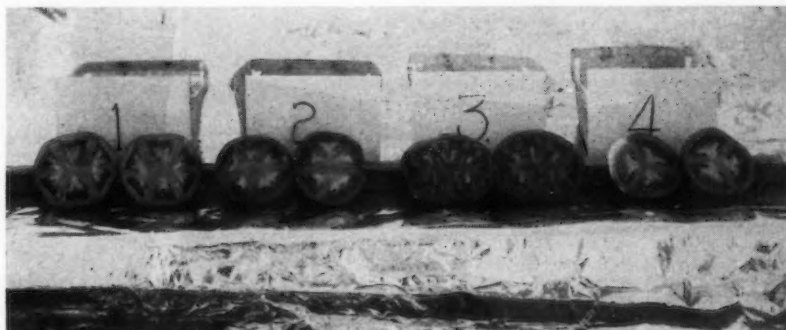
In periods of dark weather in the greenhouse and in the early spring in the field it was found that photosynthesis was slow and while the activated hormone increased set, size could not be increased if carbohydrates were not manufactured, and this takes sunlight and plenty of it. The activation of the hormone was not doing so well because of a carbohydrate shortage. A weak sugar solution was sprayed on several times. The response from this was erratic; sometimes a response showed and sometimes it did not increase yield.

We then decided to borate the sugar. When boron, sugar, and hormone were applied, the greatest responses of all were obtained. The sugar was absorbed as much as 50

times as fast. As a result, we got larger tomatoes, which were definitely heavier and meatier than usual. When cut open, they were found to be filled with solid meat—there were few or no seeds, and very little matrix. Only occasionally was a puffy tomato found.

While larger and meatier tomatoes are nearly always obtained, if weather conditions are favorable, the actual increases sometimes are not so large when sugar is used with hormone, although the activated hormone alone nearly always gives marked responses. This means that in sunlight, leaf-synthesized carbohydrates are being utilized efficiently by the activated hormone. Boron alone sometimes gave some responses, but not nearly as large.

(Continued on page 32)



Tomatoes from hormone-treated plantings. No. 1 is representative of extreme treatment with para chlorophenoxyacetic acid; fruit shows no seed but puffiness. No. 2, from plot treated with beta naphthoxy acetic acid, shows a few seeds. No. 3, from plot receiving beta naphthoxy acetic acid, boron, and sugar, is large and meaty; weighs heavier than untreated tomatoes of same size. No. 4, from check plot, is full of seed and matrix.

NEW PLANTERS Put Fertilizer Where It's Needed

Yields are increased, better stands of plants are obtained, and injury is avoided when fertilizer is properly placed

By **ALVIN R. HAMSON**
Utah State Agricultural College

YOUR present planting equipment may be reducing your yields. This is because many planters—some still being sold—do a poor job of fertilizer application. In some cases adequate amounts of fertilizer cannot be safely applied without injury to germinating seedlings, or the fertilizer is not properly applied for maximum utilization by the plant.

Fertilizer injury is often observed when more than 300 pounds per acre of 5-10-10 fertilizer, or its equivalent, is banded with the split-boot type planter which deposits two bands of

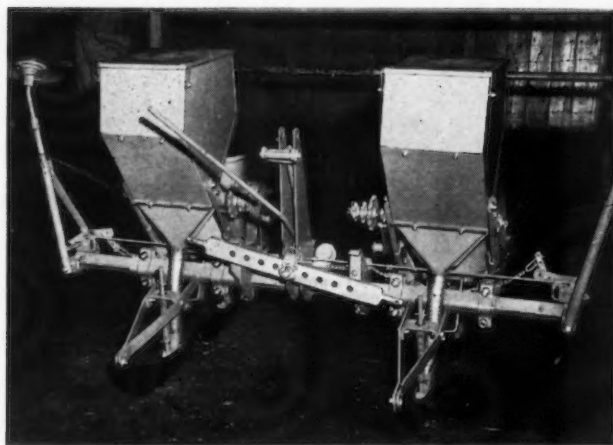
burning on the germinating seedling caused by the fertilizer salts. Seeds which are in direct contact with fertilizer do not germinate, but eventually become soft and rot.

Since fertilizer is of no advantage until it is absorbed by the plant roots, every effort should be made to obtain proper placement for maximum absorption. Since phosphorus and potash remain essentially where placed

means of the split-boot planter is not efficiently utilized.

Experiments have also indicated that fertilizer placed beyond the root zone of young seedlings, such as 7 to 8 inches to the sides of the row when applied by means of a grain drill, is not efficiently utilized by the plant.

The ideal placement of fertilizer



Ferguson two-row planter places fertilizer 3 inches to one side and 1 to 2 inches deeper than seed.

fertilizer approximately $\frac{1}{2}$ to $1\frac{1}{2}$ inches to the side and above the level of the seed.

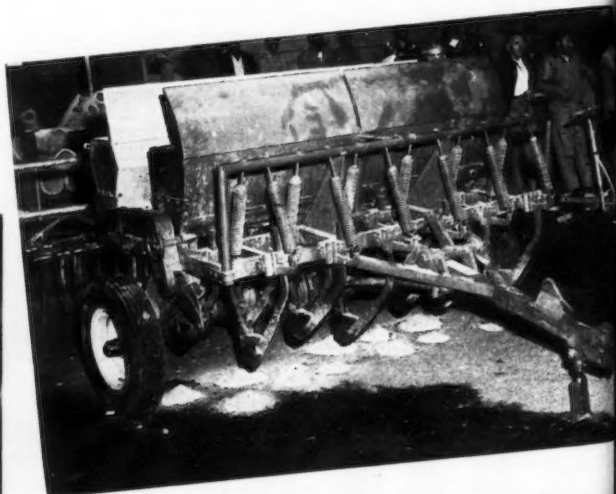
When split-boot planters are operated at present tractor speeds of $3\frac{1}{2}$ to 5 miles an hour, the fertilizer is frequently found in contact with the seed or on top of the soil. Severe injury generally occurs when as little as 25 to 100 pounds per acre of 5-10-10 fertilizer is applied directly in contact with the seed. This injury is most severe when the soil is dry.

Fertilizer injury is caused primarily by nitrogen and to a lesser extent by the potash components of the fertilizer, and generally appears as a

in the soil, these materials should be applied deeply enough so they remain in moist soil during the growing season to allow absorption by plant roots.

Nitrogen, on the other hand, is dissolved by and moves with the soil moisture. During dry periods when evaporation rate is high nitrogen is deposited at the surface of the soil. Since the movement is primarily in a vertical direction, nitrogen should not be placed either above or below the germinating seedlings because of the danger of burning. It is thus apparent that fertilizer placed on top of the soil or in the dry surface soil by

John Deere precision pea and row crop planter places fertilizer to one side of each row with vertical and lateral adjustment. Precision seed mechanism is used in distributing the seed.



is in a band 3 inches to the side of the row and approximately 2 inches deeper than the seed. Research has not conclusively demonstrated the advantage of the fertilizer bands placed on both sides of the row as compared to only one side of the row.

Lima beans, snap beans, and dry beans are particularly susceptible to fertilizer injury. Though this injury is seen less frequently in sweet corn or field corn, a number of cases were noted during the dry season of 1955.

A comparison of five planters used to plant Red Kidney beans in New York state indicated a definite advantage to fertilizer placed 3 inches to the side and 2 inches deeper than the seed as compared with the split-boot application, or fertilizer placed 7

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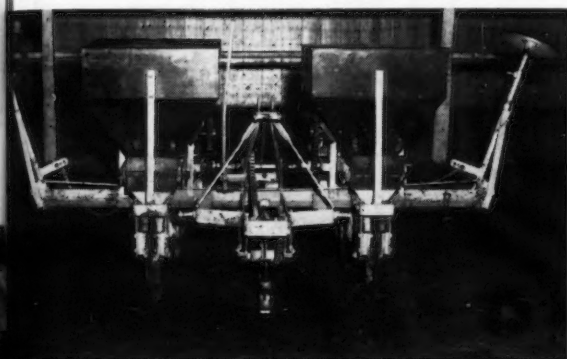
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inches to both sides with 32 pounds of 8-16-16 applied with the seed. Each of the planters was calibrated to apply 400 pounds per acre of 8-16-16 fertilizer and approximately 8 seeds per foot of row. Fertilizer placed too close to the seed reduced the yield from 24.4 to 15 bushels per acre of Red Kidney beans and resulted in a 25 per cent reduction in stand of plants.

Since beans have responded to 400 pounds of 8-16-16 fertilizer under average conditions in New York, this rate and ratio should be generally recommended for dry and snap beans. Less nitrogen should be used for lima

Iron Age planter places fertilizer 3 inches to both sides of row and 1 to 6 inches deeper than seed. Excellent seed distribution is obtained with the Cole double seed hopper pictured.



Farmcraft planter, designed by Michigan State agricultural engineers, places fertilizer 3 inches to one side in bands 3 and 6 inches deep.



Split-boot applicators haven't changed much over the years, as 1885 Blackhawk corn planter (above) and a present-day split-boot model (below) testify. This type of planter does not give recommended fertilizer placement.



Different fertilizer placements produced different stands of Red Kidney beans in New York tests. Each row was given 400 pounds of 8-16-16 fertilizer. Seeding rate was 9 seeds per foot. Two center rows with good stand received fertilizer placed 3 inches to one side and 2 inches deeper than seed. Poor stands in rows on either side received fertilizer applied with a split-boot applicator 1/2 to 1 1/2 inches on both sides and shallower than the seed. Four rows at right got 3 inches of fertilizer on both sides, 2 inches deeper than seed.



beans because of poor pod set resulting from excessive amounts of nitrogen. Similar amounts of fertilizer are recommended for sweet corn and field corn.

This amount of fertilizer cannot be safely banded with the split-boot planter. Growers who have such planters should convert them to the 3-inch placement by mounting spring tooth, disk, or shoe fertilizer applicators ahead of the seed shoe so that

the fertilizer may be placed deeply enough without burying or uncovering the seed. These fertilizer applicators are presently available from several companies.

Growers who are using grain drills to plant row crops may improve fertilizer application by pulling the fertilizer disks or hoes closer to the seed applicator and then increasing the spring tension so that the fertilizer is applied deeper than the seed. How-

ever, adjustments of old equipment should not be considered a final solution to the problem of proper fertilizer placement.

Because of research conducted by a number of experiment stations in co-operation with the USDA and farm equipment manufacturers, practically every major manufacturer of row crop planters has now improved fertilizer placement equipment which

(Continued on page 41)

THE VEGETABLE AREAS OF AMERICA

MISSISSIPPI

This is the fifth of a series on the important vegetable areas in the United States. New Jersey, Florida, Eastern Virginia, and Arizona were covered in past articles.—Ed.

By CHESLEY HINES

Mississippi State College

COMMERCIAL vegetable production in Mississippi is on the upswing after the industry had experienced some difficult times during the past few years. During and following World War II, the acute labor situation, combined with the incentives in livestock production, caused many experienced vegetable growers to shift from high labor-requiring crops to other enterprises.

When livestock prices began to level off and decline in 1950-51, a trend toward increased vegetable production was apparent. Continued labor shortages, combined with gen-

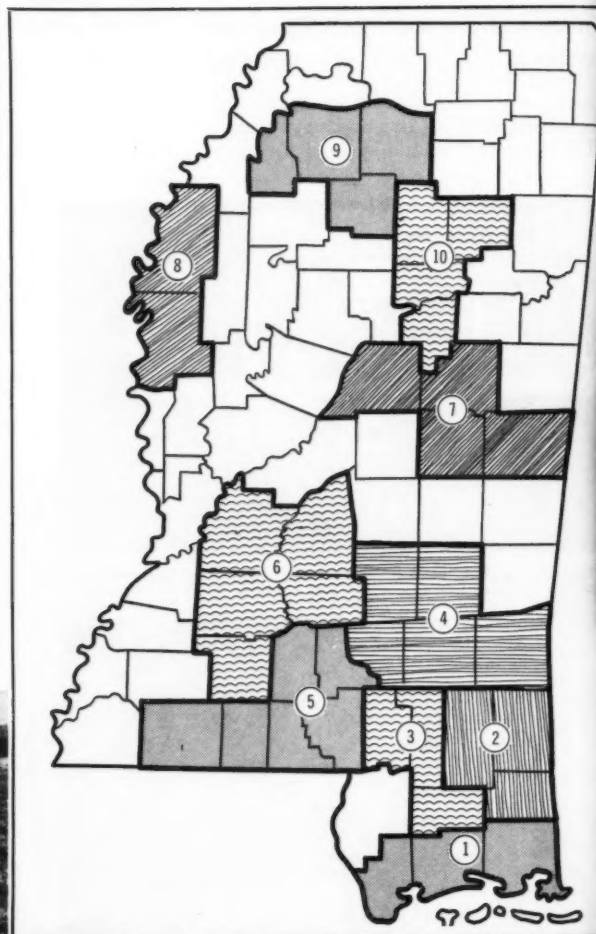


The young turnips in this field are grown for fresh market in the fall and spring.

erally unfavorable prices and severe drought conditions during the 1951-54 period, however, deterred any appreciable increase in vegetable production. As a result of the cotton reduction program in 1954, followed by an additional acreage cut in 1955, along with somewhat higher prices for most vegetable crops, new interest

in vegetable production has been shown.

Although the old established Crystal Springs-Hazlehurst vegetable area is still the most important fresh shipment deal in the state, shifts to other areas and additional crops such as watermelons, sweetpotatoes and canning crops have expanded vege-



Map of Mississippi showing the principal vegetable growing areas. Area 6, centered around Crystal Springs and Hazlehurst, is the oldest vegetable area. Watermelons, the state's number one truck crop, are grown in areas 1, 2, 4, 7, and 9, with most of them coming from area 2. Sweetpotatoes are grown in areas 4, 6, 9, and 10, with the latter also producing sweetpotato plants. Area 1, comprising the three Gulf Coast counties, produces a wide variety of truck crops.

table production to include the 10 principal areas shown on the map above.

Marketing facilities such as the State Farmers' Central Market in Jackson and several sweetpotato storing and grading plants, along with grading and packing sheds in the new areas for such crops as watermelons, lima beans, crowder peas, sweet corn and snap beans, have been established within recent years.

The principal vegetable crops grown for fresh shipment and local market include sweetpotatoes, water-

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FEBRUARY, 1955



ing pimienta peppers for disease control with a power sprayer. Crop is grown for processing.



Irrigation system in operation on a Mississippi vegetable farm. Use of irrigation is expanding rapidly, with more than 2,000 acres of vegetables under irrigation in area 6 (Crystal Springs).

melons, cabbage, snap beans (bunch and pole), tomatoes, green peppers, sweet corn, crowder peas, okra, turnips, spinach, squash, Irish potatoes and cantaloupes.

The crops grown for processing include cucumbers and ripe peppers for pickles, snap beans, crowder peas, pimienta pepper, spinach, turnip and mustard greens, okra and sweetpotatoes.

The estimated total value of the commercial vegetable production in the state in the last four years has averaged from 8 to 10 million dollars. The total estimated acreage planted to vegetable crops, including sweetpotatoes and Irish potatoes, was slightly more than 60,000 acres in 1954.

The estimated acreages harvested and value of the principal crops grown for fresh market in 1954 were as follows: snap beans (spring and fall)—4,400 acres, value of \$542,000; cabbage—4,500 acres, value of \$765,000; green pepper—1,300 acres, value of \$275,000; tomatoes—2,200 acres, value of \$317,000; watermelons—9,500 acres, value of \$619,000; spinaeh—700 acres, value \$150,000.



Grading and loading Mississippi watermelons from grower's truck to buyer's trailer-van.

In the Crystal Springs-Hazlehurst area, the four main crops grown for fresh shipment are cabbage, snap beans, tomatoes and green peppers. The acreage grown in cabbage and snap beans has held fairly steady for the past several years while a sharp decline in tomato acreage has occurred since 1950, when an epidemic of late blight almost completely destroyed the crop. A gradual increase in green pepper production has occurred in recent years.

There appears to be a definite revival of interest in tomato production, with a substantial increase indicated.

for 1956. Growers are planning to establish a "pink-deal" as a step forward in marketing the 1956 crop. Many growers are also planning to try additional crops such as lettuce, broccoli and cauliflower.

The leading varieties grown in this old established area are as follows: snap beans—Contender and Black Valentine; cabbage—Early Round Dutch; tomatoes—Kopiah, Rutgers, Manalucie; green pepper—California Wonder, Early Calwonder, Yolo Wonder. Rapid strides in irrigation have been made in this area within the past five years. Growers in this area now have facilities for irrigating at least 2,000 acres of vegetable crops.

From the standpoint of acreage planted, watermelon production is now the most important truck crop, other than sweetpotatoes, grown for fresh market. The acreage of watermelons was increased from 9,500 acres in 1954, to 14,000 acres in 1955. Watermelons are grown in several areas of the state with organized marketing programs established in most of the areas.

The marketing season for this crop begins around June 10 in areas 1 and 2, and progresses up the state to areas 4, 7 and 9 to provide volume movement continuously through early August. A large per cent of the crop is moved by trailer-trucks. The Extension Marketing Specialists co-operate with marketing organizations in the chief producing areas by providing more than 2,000 truckers with advance information on the volume expected, varieties grown, and time of harvest of the crop for each area.

During the past two years, a definite (Continued on page 44)



Another Years-Ahead
**FIRST BY
FERGUSON**

4-Way Work Control
on the
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How Ferguson Quadramatic Control Lets You Take Full Charge of Implements

Control of implements is sure and easy with a Ferguson "35" because of the time-tried and continually improved Ferguson System.

Right at your finger tips is new Quadramatic Control that will amaze you with its close command of implements. This Ferguson "first" lets you raise and lower implements, select draft and maintain working depth, adjust the hydraulic system's speed of response and hold implements at any position you choose—all with the same compact control quadrant.

And you'll find the other members of the Ferguson 4-Way Work Control team contributing

their part to your mastery over every farm job: Variable-Drive PTO for versatile, synchronized power; "2-Stage" Clutching for one-pedal control of both transmission and PTO; and Dual-Range Transmission to insure peak efficiency in each speed range.

No longer need your tractor's limitations dictate how well you farm. Ask your Ferguson Dealer to show you how the Ferguson "35" lets you take *complete charge*!

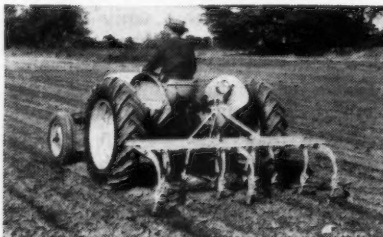
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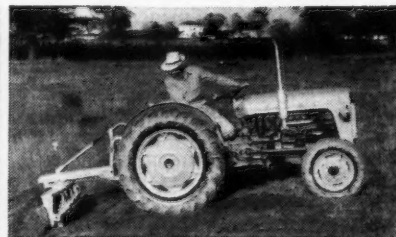
FOR PLOWING, draft is maintained automatically, even with heavy overhanging implements.



FOR DISCING AND CULTIVATING, you can control penetration exactly, even in changing soils.



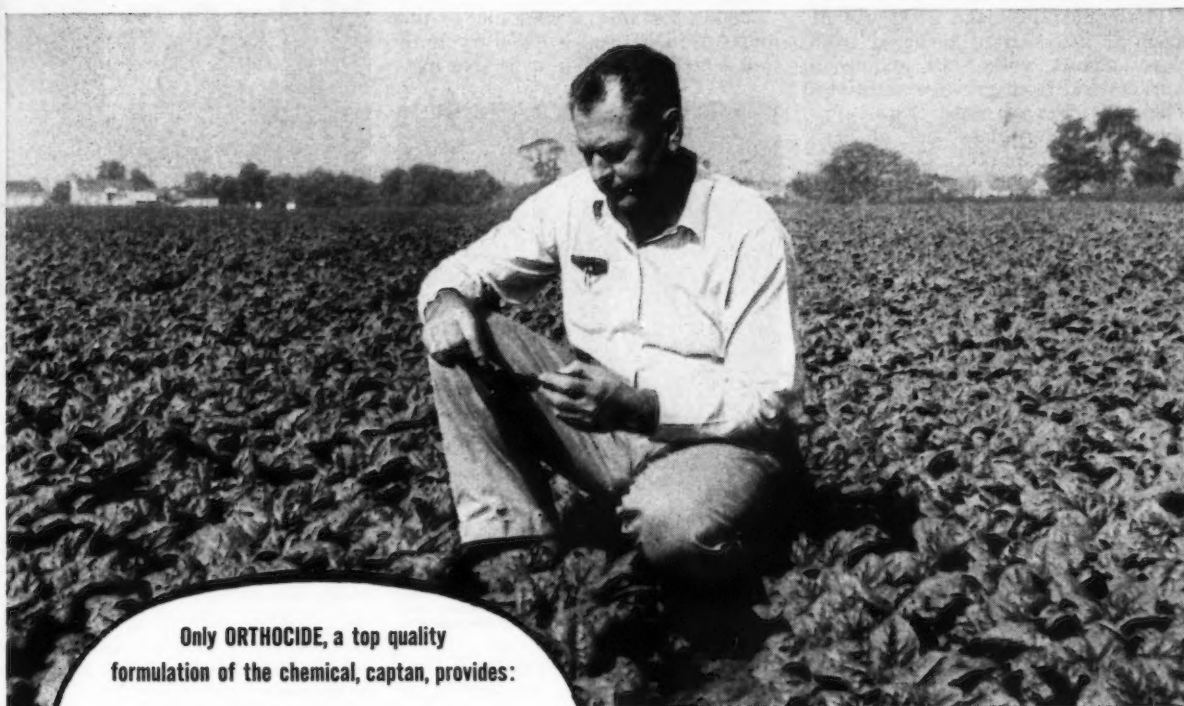
FOR UTILITY JOBS, you can raise, lower, hold, and operate implements while you're working.



Plan NOW for a successful vegetable disease program

Lawrence Powell, Field Manager, King Farm, Morrisville, Pennsylvania, used ORTHOCIDE (contains captan) 50 Wettable on cucumbers and spinach. He reports highly satisfactory control of disease despite unfavorable weather conditions. Mr. Powell says: "Our experience

thus far indicates that ORTHOCIDE gives effective control of the diseases affecting our major crops. The use of *one* such versatile material, rather than the half dozen different fungicides that were formerly necessary, greatly simplified our operations."



Only ORTHOCIDE, a top quality formulation of the chemical, captan, provides:

1. Exceptionally fine particle sizes.
2. Better sticking, wetting and spreading agents.
3. A superior carrying agent (non-catalytic).
4. Compatibility with the full ORTHO line of insect and disease controls.

Lawrence Powell (above) examines ORTHOCIDE-sprayed spinach. ORTHOPHOS (containing parathion) ORTHENE 3D, and ORTHOCIDE were mixed together to spray spinach acreage at King Farms.

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How the Prosperous RISTOWS GET BUMPER CROPS

These Hoosier growers put scientific know-how, plus three generations of experience, to work for them

By F. C. GAYLORD *Purdue University*

TYPICAL of the prosperous truck crop growers around Indianapolis are the Ristow Brothers. The family has been in the gardening business for 65 years.

Herb and Ed make good use of scientific information garnered from close contact with state extension workers and from growers' meetings. Their 35 acres of truck crops—plus one acre under glass—are all irrigated. They market their crops through the Indianapolis Co-operative Growers Sales.

The land around Indianapolis is loam or sandy loam. Ten years ago Ristow and others used lots of manure. Now, all the land is wintered over with a cover crop of rye planted immediately after harvest of each crop. When a large amount of commercial fertilizer is going to be used, it is broadcast and plowed 10 inches deep in early spring.

The use of repeated cover crops and heavy applications of commercial fertilizer has made the soil very fertile. The average pH is from 6.5 to 6.7. Every year the Ristows use from 15 to 18 tons of 4-16-16 or 3-9-18 fertilizer on their 35 acres.

Cabbage—7 acres of it—is one of their principal crops. Early Cabbage, Early Copenhagen, and Globe varieties are followed with Marion Market and Wisconsin Hollander so as to have cabbage the entire season. The plants in the 36-inch rows are spaced only 11 to 12 inches apart in order to keep the heads down to 3 to 4 pounds each. The 7 acres of cabbage are fertilized with 400 pounds per acre of 3-9-18. This is applied with a disk, broadcast. Seldom is sidedressing done, but in recent years, 100 pounds per acre of ammonium nitrate has been used.

Set onions have been another paying crop. Only the Yellow Globe variety is used. Fertilization for this crop consists of 500 pounds per acre of a 4-16-16 disk broadcast just before setting. Setting is done by machine, drilling in 20 pounds of sets per acre. Yields are about 350 bushels per acre. These are sold in 50-pound bags in

July before muck crop onions are on the market. No spraying is done except on the crop, but with increasing cost of labor, they expect to weed spray, too.

Staked tomatoes are another of the musts. The Ristows are still trying to find a real hybrid, but at present they



Ed Ristow, production manager of the firm, examines the December crop of greenhouse leaf lettuce. Tomatoes and radishes are also grown.

are growing Kokomo, Purdue F₂ hybrid, and Stokesdale. In fertilizing they plow under 800 pounds of 4-16-16 or 3-9-18 at 10 to 12 inches. The tomatoes are sprayed every two weeks with captan or maneb plus an insecticide. They are marketed when pink ripe in 10-pound baskets. Average yields are 5 to 6 pounds per plant. The fruit is graded into No. 1's (2½ inches and up, and smooth), medium, and unclassified.

Another crop of prime importance is muskmelons. Iroquois is the principal variety with some Pride of Wisconsin and Honey Rock. The land is thoroughly prepared, then fertilized by disking under 200 pounds to the acre of 3-9-27. All melons are direct seeded, starting about May 1 and ending May 30. The Ristows drop about six seed in a hill, thinning later to two plants. To control beetles, methoxychlor is used as directed on the con-



Ed hauls a load of parsnips in from the field. They will be washed and sold throughout the winter in 10- and 20-pound braided baskets.

tainer. They sometimes apply a rotenone-talc dust, using a power duster. The Ristows have not used a fungicide spray with Iroquois, but with Pride and Honey Rock this is essential. Melon harvest is from about August 15 to October 1. They are sold by the bushel and only No. 1's go to market.

Another main crop is parsnips. The Ristows plant their own selection of Hollow Crown. Planting is done in March in 22-inch drilled rows. Their recommendation for success with parsnips is to have fertile soil and "lay off" the commercial fertilizers. They usually get a bumper crop of more than 20 tons per acre.

Other crops grown are peppers, eggplant, string beans, carrots, leaf lettuce, endive, escarole, kale, mustard, Chinese cabbage, acorn squash, spinach, and turnips. These are grown as second or substitute crops and are not directly fertilized, with the exception of eggplant. This crop gets 300 pounds of 4-16-16 or similar fertilizer. Acorn squash grows too large if directly fertilized, and other crops get sufficient plant food from previous crop residues.

THE END.

AMERICAN VEGETABLE GROWER

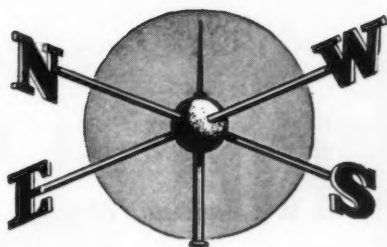
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- Oregon Growers Learn Latest on Automatic Bean Harvesting
- Marketing Pointers Given New York Growers by Experts

Wins VGAA Title

MARYLAND—Dr. Henry Albert Jones of the Horticultural Crops Research Branch, U. S. Agricultural Research Serv-

FREEZE DAMAGE IN FLORIDA

Florida's \$150 million winter vegetable industry appears to have weathered early January freezes, although some growers experienced a complete crop loss.

Said the Federal Crop Reporting Service after a four-day field survey, "The damage is serious, but total yields should be about as good as last year because acreage . . . was up."

While some fields were wiped out, others were merely damaged, and some escaped with no damage at all. Yields and quality generally suffered. Crops suffering most were tomatoes, cucumbers, and eggplant. The total Florida winter tomato crop was estimated at 3.8 million bushels on January 13, about a million less than last year.

Nearly all the green beans were destroyed, but growers were able to replant their fields and expect to have normal production in February and March. Although cucumbers were severely damaged, their season was at its tail end. Eggplant was badly scarred, with frost taking plants on the east coast. Potatoes, cabbage, celery, sweet corn and peppers suffered only slight damage.

ice, Beltsville, was named *Vegetable Man of the Year* by the Vegetable Growers Association of America.

Dr. Jones is credited with the original discovery and research into the genetics of cytoplasmic male sterility in plants and developing methods for its application to commercial production of F_1 hybrid seed.

Dr. Jones' most widely publicized contributions are the high yielding, high quality, disease resistant onion and spinach hybrids which are so popular with growers at the present time.

A member of the Maryland Vegetable Growers Association, he served as its secretary in the early 1920's when he was on the staff of the University of Maryland.—*Andrew A. Duncan, Ext. Veg. Spec., College Park.*

Mechanical Bean Pickers

OREGON—At the 70th annual meeting of the Oregon State Horticultural Society, held in Corvallis in December, vegetable growers heard that progress is being made in developing mechanical bean pickers, but more work is needed to perfect them. John Boyce, of Food Machinery & Chemical Corp., said an experimental machine being developed in Multnomah County picked rows with no damage to beans. To tailor the vines to the row-straddling picker, chemical defoliants were used on the lower 15 inches of the vine to concentrate growth upward. Boyce said further improvements are necessary to overcome yield reductions through blossom damage in early pickings.

A bush bean harvester that works well in the East didn't do so well in Polk and Linn county trials this year because Oregon beans yielded so heavily that they swamped the machine, according to C. K. Murphy, of Chisholm-Ryder Co. He added, however,

that the machine could be modified to be practical here.—*Harold and Lillie Larsen.*

Water Legislation

PENNSYLVANIA—Demand for water, including irrigation of farm crops, is increasing so rapidly in this state that growers may need new legislation to assure them of an ample water supply.

This was the warning sounded by the Hon. Maurice K. Goddard, secretary, Pennsylvania Department of Forest and Waters, before the educational conference of the Pennsylvania Vegetable Growers Association January 4-5 at Pennsylvania State University.

The conference marked a departure from the traditional midwinter meeting at the Pennsylvania Farm Show. The session at Penn State will become an annual affair.

Modern merchandising means self-service, prepackaged products, and a variety of services to the consumer, R. B. Donaldson, head of agricultural economics extension at Penn State, declared. Growers can do little to change merchandising practices, he said, and advised them to develop a marketing

program to conform to modern methods of merchandising vegetables.

Since large-volume buyers must buy from large-volume producers, he suggested that small and medium-sized growers adopt co-operative marketing or develop a system of country buyers. He urged a strong vegetable growers' association commensurate with the importance of the state's vegetable industry.—*N. M. Eberly, Agr'l Editorial Dept., University Park.*

Increase Acreage

CALIFORNIA—An increased sweet corn acreage—for green packing—and the largest commercial tomato acreage in history appear in prospect this year in the North San Francisco Bay region.

Corn growers heard of the plans at a recent meeting of suppliers to the Healdsburg Produce Co., an organization formed by Bay Area commissionmen in 1954.

Al Rustin, of the Rustin Produce Co., San Francisco, and Ralph Donohue, of Don Alvarado Co., Decoto, outlined plans for contracting for 1,000 acres of tomatoes next

(Continued on page 20)

Know Your . . . VEGETABLE SEEDS

By VICTOR R. BOSWELL
U. S. Department of Agriculture

ONION

THE COAL-BLACK seeds of onion are generally flat on one side and somewhat irregular because of the way they are crowded in the locules of the fruit in the seed head.

The seeds are notoriously short-lived. In warm, humid places onion seed may drop measurably in viability in only three weeks, and fall below an acceptable standard in six weeks. It must be kept cool and dry.

Acreage of seed onions in this country has varied from about 6,000 acres annually during World War II to about 1,000 in 1952-53. Average yields vary from about 450 to 600 pounds per acre. The main districts of production are in Idaho, California, Oregon, and the Southwest, where low humidity favors freedom from downy mildew and facilitates harvesting and drying of the seed.

The seed heads, which develop in the second season of growth, are usually gathered by hand before the seed shatters. They are dried in shallow trays, in thin layers on canvas sheets in the open, or in trays in sheds. Seed that is separated from the chaff by "washing" must be quickly dried with thorough agitation to prevent loss of viability.

Seed of many new F_1 hybrid onions is now available in large quantities. Commercial development of these hybrids is based on entirely new genetic principles and plant breeding methods that take advantage of



a character called cytoplasmic male sterility. H. A. Jones discovered this character in 1925, later determined its inheritance, and devised practical methods of using it to produce hybrid seed. Production of hybrid onion seed is highly exacting. The cross-pollinating is done by insects, mainly bees.



Crop surrounded by quack grass
...where no MH is used

KILL QUACK GRASS

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MH was sprayed on quack grass
prior to planting this crop

Quack grass is licked! Now MH not only reduces quack grass growth, but also eliminates this nuisance, in areas devoted to high-value crops. MH is so safe that seeds of vegetable and field crops can be planted on treated areas as soon as plowing and preparing the soil are completed. No soil toxicity.

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SEE—Naugatuck Chemical Division, United States Rubber Company, at work on NBC's "Color Spread" TV spectacular, Sunday, March 25, 7:30 PM, EST.



United States Rubber

Naugatuck Chemical Division

Naugatuck, Connecticut

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygion, Aramite, Synklor, MH, Alanap, Duraset.

STATE NEWS

(Continued from page 19)

season, as well as for approximately 700 acres of corn.

Last year, in the first large-scale commercial sweet corn operation in Sonoma County, 500 acres were planted and 350 acres harvested.

Failure to harvest the other 150 acres was partly due to poor production and partly to a build-up of corn ear worms.

Rustin officials said the bulk of the tomato acreage will probably be in Napa County. Production will be both for the cannery and for fresh shipment in both pink and green stages to the eastern market.

Tentative price schedules of \$40 per ton for No. 1 pink stage and \$30 for No. 2 shipping tomatoes were discussed and the suggestion was made that canning tomatoes should be around \$22.50 to \$23.

One drawback to tomato growing in the past has been grading of the crop at the Oakland point of destination, as in some cases the vegetables suffered in transit. Plans were discussed to grade at the Healdsburg receiving station where the corn was processed this year, before shipment to the cannery.—Neale Leslie.

Marketing Stirs Growers

NEW YORK—The joint meeting of the Empire State Potato Club and the New York State Vegetable Growers Association in Buffalo the first week in January was noted for its vigorous discussion by growers of marketing problems.



L. Huested Myers, Selkirk, newly elected president of NYSVGA.

In the potato session, Prof. Marius P. Rasmussen, marketing expert from Cornell and associate editor of *AMERICAN VEGETABLE GROWER*, expressed some forceful views on potato marketing. He said that potato growers are doing a better job of growing, but a poorer job of selling their product.

Rasmussen cited seven points that potato growers should keep in mind.

1) Remember that the eye buys. The average housewife buys 14 items in 17 minutes at the supermarket.

2) The grower who isn't washing or cleaning potatoes in the next few years will probably go out of business.

3) Get potatoes into a container where they can be seen, either an open front paper bag or film bag.

4) Up-grade your product. Potato growers have not made as much progress in grading as have growers of fruit and other vegetables.

5) Potato growers must pay some attention to the taste quality of their product. Newer varieties of potatoes for the most part do not have good flavor characteristics.

6) The alert potato grower will market his potatoes, according to their use, separating the bakers and boilers by specific gravity.

7) There are indications that potatoes should be sized more closely.

In a panel on marketing fresh vegetables, John Baker, sales manager of the King-

(Continued on page 22)

AMERICAN VEGETABLE GROWER

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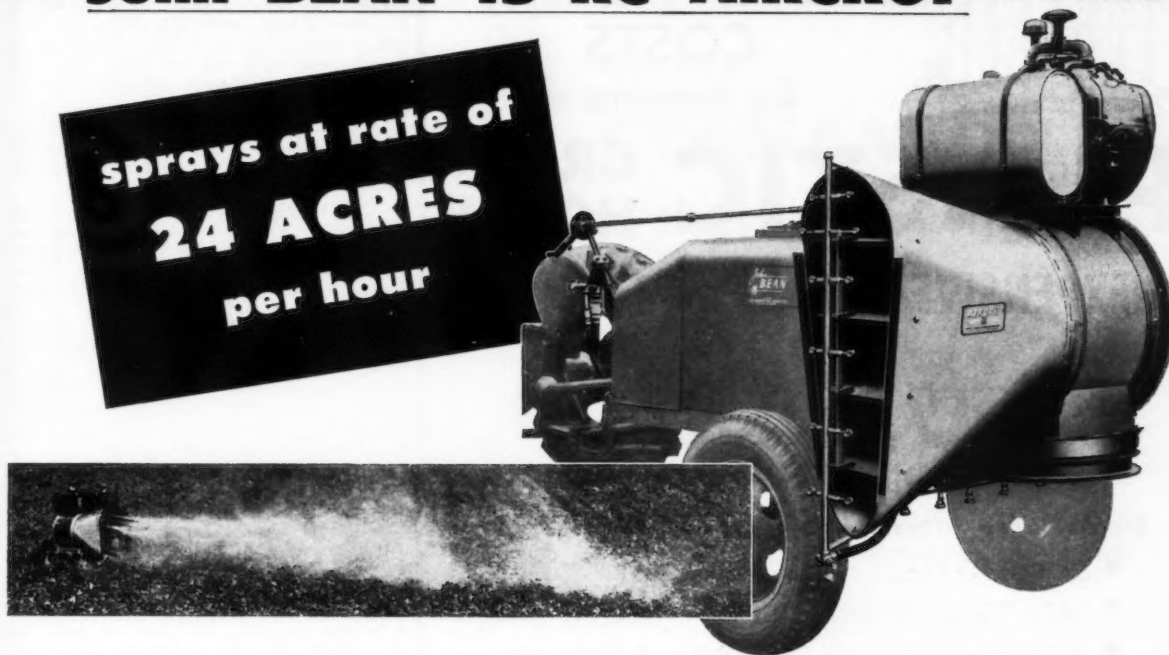
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per hour



With the John Bean 15-RC Aircrop installed on your high pressure sprayer, you'll spray 60' swaths and do a thorough job at the rate of 24 acres an hour at a 4 mph tractor speed. Just estimate your savings in time and labor over boom-type spraying! Many growers can save the cost of the Aircrop in a single season.

Straight-through delivery of a large air volume at medium velocity is one secret of the Aircrop's phenomenal success. The 15-RC's 29" axial flow fan delivers 31,000 cubic feet per minute, but the

air's velocity is only 70 miles per hour. This, plus the exclusive John Bean design of the Aircrop's discharge head provides uniform spray pattern over entire width of swath.

And see how these other Aircrop features will speed your spraying job: (1) Entire unit rotates in a 200° arc to take advantage of wind direction (2) Rotation and internal deflectors controlled from the tractor seat (3) Water hauling reduced ½ to ¾ by use of concentrates.

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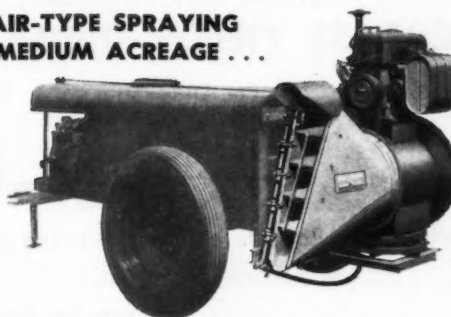
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Sprays swath from 30 to 40 feet wide. Has 21-inch axial flow fan and 180° rotation. For attachment to sprayers with pumps delivering 7 gpm or more at 400 lbs. pressure.



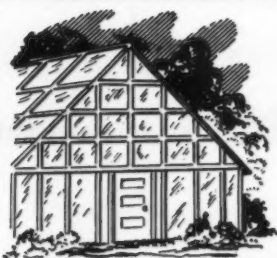
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STATE NEWS

(Continued from page 20)

Ferry Co-operative, told how the King-Ferry growers produced snap beans mainly for fresh market. He says the emphasis is on trying to maintain high quality and to keep the brand, Cayuga Chieftain, of a uniformly high grade. He points out how they often get premium prices. They hydro-cool sweet corn and feel there is a good future for quality sweet corn cooled in ice.

Warren Grotke told growers about problems in retailing vegetables. He believes prepackaging is here to stay, and predicted that in five years 80 per cent of produce will be prepackaged.

Dr. Homer C. Thompson and Dr. Paul Work were honored at the meeting for their many years of service to agriculture. Both are retired from the faculty of the College of Agriculture at Cornell University.

William Giddings, Baldwinsville, continues as secretary-treasurer of NYSVGA, Vice-presidents elected were: Carl Salmonsen, East Syracuse; Otis Davis, Prattsburg; Don Shoemaker, Webster; Henry Marquart, Jr., Cherry Creek; and Stuart Allen, Waterville.

Newly elected vice-president of the Empire State Potato Club was Harland H. Branch, Saranac Lake. Secretary-treasurer re-elected for 1956 is John K. Jackson, Savannah.

New Vegetable Specialist

NEW JERSEY—W. Bradford Johnson became associate extension specialist in vegetable growing at Rutgers University February 1. He will share the duties of the extension service's educational work among vegetable growers with Charles H. Nissley, extension vegetable specialist for many years. He will be the first assistant Nissley has had.



Before coming to Rutgers, Johnson was an instructor in vegetable culture at the University of Massachusetts.

A native of Philadelphia, Johnson received his bachelor of science degree from Pennsylvania State University in 1942. He received the master of science degree at the University of Massachusetts in 1951, and has worked toward his doctor of philosophy degree at Harvard University.

Johnson became familiar with vegetable growing in South Jersey counties and worked with several members of the College of Agriculture staff in 1946 and 1947 while he was employed by the Ritter Seed Company in Bridgeton as trial grounds assistant.

Grows Mushrooms

MICHIGAN—Charles P. Thompson has harvested his first crop of mushrooms, cultivated in the basement of the Allegan City Hotel.

He plans to dry the mushrooms and ship them to Seattle to be made into a concentrated mushroom salt for food seasoning.

Thompson said the hotel's basement, with a constant temperature of 58° and a constant humidity, was an ideal spot for the crop. He plans to have 10,000 square feet of the crop growing soon. The beds will yield about 6 pounds of mushrooms per crop after they have been in culture for three months.—George E. Toles.

AMERICAN VEGETABLE GROWER

FEBRUARY,



"Dry weather or wet, **CYANAMID** is there working"

...says *William J. Darden*
Corn Grower
Smithfield, Va.

When you use Cyanamid, you know what a difference leach-resistant nitrogen can make. Cyanamid nitrogen really stays with a crop. Here is Mr. Darden's experience, in his own words:

"I put Cyanamid under all my corn. Ordinary nitrogen doesn't do any good in dry weather, but Cyanamid is there and goes right on working. After a wet spell, too, Cyanamid nitrogen is there working because it hasn't leached away. It also saves the extra cost and labor of side dressing with nitrogen."

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1. *Thorough rotting of plowed under organic matter.* Cyanamid supplies soil bacteria with an ideal, balanced diet of nitrogen and lime.
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Alanap®, Naugatuck's new before-and-after weed killer offers you great new savings by practically eliminating hand weeding. Spray Alanap (pre-emergence) after seed is covered. Annual weeds are killed before they can appear. Specific instructions are available for post-emergence applications.

Country-wide usage conclusively proves:

1. Alanap can save growers of cantaloupes, watermelons and cucumbers from \$35 to \$150 per acre in weeding costs.
2. One pre-emergence application of Alanap gives excellent control of a wide variety of weeds for 3-8 weeks—even after heavy rains.
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SEE - Naugatuck Chemical Division, United States Rubber Company, at work on NBC's "Color Spread" TV spectacular, Sunday, March 25, 7:30 PM, EST.

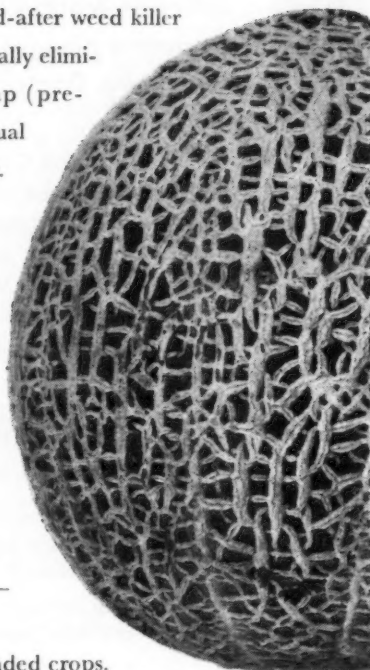


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producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, Duraset.



Answering Your QUESTIONS

Don't let your questions go unanswered. Whether large or small, send them with a three-cent stamp for early reply to Questions Editor, AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

BLACKHEART OF CELERY

We are just about out of the celery business unless we can control blackheart. Could you send me the new control method used by Dr. Carroll M. Geraldson as mentioned in your November issue?—Minnesota.

A circular on the control of blackheart of celery has been sent to our reader. These circulars can be obtained by writing Agricultural Experiment Station, University of Florida, Bradenton, Fla.

POTATO BLIGHT INFECTION

My potatoes coming out of storage are affected with sunken dark spots. What is the trouble?—Michigan.

Sounds like late blight infection started from wet weather at harvest time last fall. These potatoes must be destroyed for if they sprout, spores will be released to infect potato and tomato fields. Safest way is to bury them.

FIREBALL TOMATO

Where can I obtain seed for a trial of the new Fireball tomato as shown in the January, 1955, issue?—Idaho.

Seed of the Fireball tomato is available from the introducer of the variety, the Joseph Harris Seed Co., 60 Moreton Farm, Rochester 11, N. Y.

HOT KAPS

Where can I buy Hot Kaps?—Alabama.

Hot Kaps are available from Germain's Seed & Plant Company, 747 Terminal St., Los Angeles 21, Calif.

NEW SWEETPOTATO

Our main crop is sweetpotatoes and since I read in your magazine about the new Kansas variety known as Kande, I would like to try it. I would like to know where I can get seed and whether it is in the sweetpotato family or the yam family.—New Jersey.

You can obtain seed from the following sources in Kansas: James K. Greig, Department of Horticulture, Kansas State College, Manhattan; John Britt, Route 1, Manhattan; Howard Caldwell, DeSoto; Howard Kientz, Manhattan.

The Kande is a yam type with an attractive bronze skin color and good shape.

SMALL SPRAYER

In your recent article, "Earlier Tomatoes with Growth Regulators," you picture a small sprayer. Could you tell me what kind of sprayer this is and where it can be purchased.—Nebraska.

The small sprayer is a special model made by Milwaukee Sprayer Manufacturing Co., Milwaukee, Wis. It can be obtained in the quart size, pictured in our article, or in a half pint size.

PLASTIC DETERIORATION

Is sunlight the only factor in plastic deterioration? If so, would it be safe to take it off the greenhouse before the hot summer days and use it again the following winter?—Ontario.

Hot summer days are not the only cause of deterioration of polyethylene. The ultra violet of sunlight does speed up oxidation but polyethylene will deteriorate whenever it is spread out to air, even if sunlight is not present. By removing and rolling in a tight roll and putting in a dark, damp basement, the plastic will keep for quite awhile.

Homer L. Kryg work that crops, still

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Emil Tadye, Wapato ate without o from the field to grind feed

Charles Montal, Ba chores on my trailers and grease farm t



Homer L. Kryger, Yuma, Arizona: "My 'Jeep' is the most useful piece of equipment I own. I use it for cross-field travel and other work that requires covering a lot of ground in a hurry. It's small enough to maneuver in tight places without running over crops, still has plenty of power to pull equipment around the field."

Vegetable growers save time and money with the 4-Wheel-Drive 'Jeep'



Emil Tadye, Wapato, Washington: "On my farm it'd be hard to operate without our 'Jeep'. We use it to haul melons, tomatoes from the field, for harrowing and spreading fertilizer, to grind feed, saw, elevate corn and do many other jobs."



Charles Montal, Bainbridge Township, Michigan: "I use my 'Jeep' for all chores on my farm — to haul baskets to the field, pull trailers and balers, power a compressor to pressure grease farm tools on-the-job, and for trimming."

The versatile Universal 'Jeep' spreads its cost over dozens of jobs and helps alert growers keep work on schedule every day of the year.

The extra traction of the 'Jeep's' 4-wheel drive lets you pull heavily-loaded trailers or irrigation equipment through slippery mud, loose sand or up steep grades. Saves time in the field, too — hauling in fertilizer or bringing out crops. And, its low center of gravity and all-wheel traction provide greater safety on slopes and hillsides.

On the highway, the 'Jeep' travels in conventional 2-wheel drive at top legal speeds. With power take-off or hydraulic lift, it operates most three-point hitch farm implements and many different kinds of power-driven equipment.

Let this all-purpose, all-season vehicle start working and earning for you now. See the 4-Wheel-Drive Universal 'Jeep' at your Willys dealer or write for information.

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**Spare yourself loss of a crop by
planting varieties you really want**

By MITCHELL JENKINS, Jr.

North Carolina State College

THIS is a good time of year for vegetable growers to study their seed catalogs and experiment station bulletins with a view to selecting the correct varieties to plant this coming spring.

There have been many instances in recent years of growers ordering one vegetable variety when they thought that they were calling for an entirely different one. The result was a poor crop, or perhaps a crop that could not be marketed at all.

Several years ago I was asked to visit some extensive cucumber plantings in a near-by county. Buyers were turning down all of the cucumbers on the grounds that they were pale in color and too unsightly in appearance. The grower had intended to plant a long green variety, but he had made the mistake of ordering 100 pounds of Long Green. The seed company had sent him seed of the old variety by that name, and he suffered a crop failure because he could not sell what he produced. He should have specified A. & C., Marketer, or some similar variety.

Orders "Iceberg" by Mistake

Not long ago another grower discovered that his "iceberg" lettuce was light green in color, that its leaves were tinged with reddish-brown, and that the stems of the seedlings were red instead of green. He had intended to plant Great Lakes but he made the mistake of placing an order for 10 pounds of Iceberg lettuce seed. Needless to say, he was not happy with what he got—the old home and market variety called Iceberg which produces a soft head and bolts readily under North Carolina conditions.

The name "Iceberg" is used by many growers to describe the crisp head-type of lettuce that is commonly grown for market, but there are dozens of varieties that fall in that group. The variety name must be specified.

Another grower planted 5 acres of Black Valentine beans. After he had paid for having the beans picked, and had dumped them, he certainly knew the difference between that variety and Stringless Black Valentine.

THE END.

AMERICAN VEGETABLE GROWER

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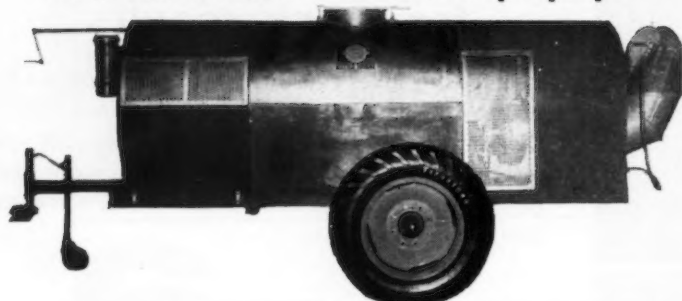
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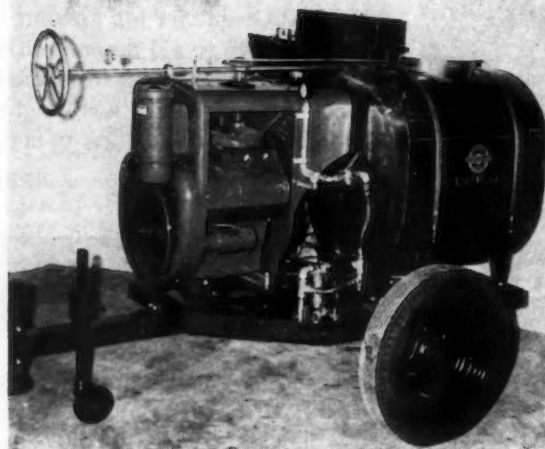
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TIPS ON POTATO MARKETING

Some vital facts which should
pave the way to better prices

MARKETING was a major topic of discussion at the special meetings held for potato growers during the recent annual convention of the Vegetable Growers Association of America in Washington, D.C.

William N. Case, director of the National Potato Council, gave his analysis of potato marketing problems. He spoke of the need for a broad program of research to influence increased consumption of potatoes. He told of the nutritional qualities of potatoes and how a program for physical fitness could mean a longer average life for human beings and at the same time increase appetites for solid foods such as potatoes. Statistics show, stated Case, that lack of exercise and overconsumption of fats are among reasons for the increase in heart trouble.

A. E. Mercker of the USDA pointed out that increased acreage and record yields of 266 bushels per acre were responsible for the large 1955 potato crop. The increased production resulted in lower prices for the producer.

He told how growers in six of the late potato states, in order to sell their crop at a profit, are operating under a federal marketing agreement, and in two other late states under state agreements.

Diversion Program

To help growers obtain better prices, the USDA offered growers a diversion program which encourages the shipment of the more desirable sizes of quality potatoes. This diversion program which prohibits the shipment of culls and other low-grade potatoes, is now operating in seven states. Since its initiation, Mercker said, prices for white potatoes have been from 65 to 90 per cent greater than prices received last year.

Mercker felt that potato producers are not fully aware of the many rapid changes taking place in the marketing of potatoes. Closer sizing and packaging in small consumer packages are among the "musts." Today, processors and restaurants pay careful attention to the cooking quality of potatoes for specific uses, and many insist that the potatoes be tested before they are purchased for processing.

THE END.

AMERICAN VEGETABLE GROWER

woodruff seed

FOR A BETTER CROP OF

Carrots

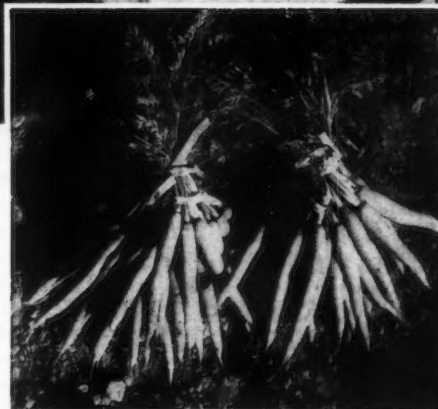


IMPERATOR LONG TYPE CARROT

A specially selected strain of Emperor developed to meet the demand for a longer, slender, tapering carrot of the Emperor type. It will average 1½ - 2 inches longer than the original strain of Emperor. Attractive orange-color flesh has exceptional eye appeal.

Try the Woodruff strain of this popular variety, now being used extensively in the large carrot-growing areas of the West and Southwest.

Prompt shipment if you contact any of the Woodruff Branch offices listed below.



Send now for the new Woodruff Seed Annual, showing improved strains and varieties for 1956.



F. H. WOODRUFF & Sons, Inc.
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HORMONE for TOMATOES



**"I Picked Ripe Tomatoes
3 WEEKS EARLIER Because
I sprayed my tomatoes with
BLOSSOM-SET Hormone."**

Gus Schluterman, Chicago, Ill.

YOU CAN DO IT, TOO!

Use BLOSSOM-SET Hormone on your tomatoes to stop blossom-drop, make blossoms set fruit. Your tomatoes will ripen weeks earlier. They'll be larger, meatier, richer in color, and more deliciously flavored. And you'll get more tomatoes on every plant!

PROVED BY EXPERIMENT STATIONS!

Experiment Stations all over the country have proved the effectiveness of BLOSSOM-SET. In Massachusetts a test plot yielded 276 ripe tomatoes on the first day of picking; not a single tomato was ripe on an unsprayed comparison plot. In Georgia, 30 lbs. of tomatoes were picked from a test plot in the first 3 1/2 weeks of picking and less than 1 1/2 lbs. from an unsprayed plot. In Minnesota, BLOSSOM-SET-sprayed tomatoes ripened two weeks earlier than unsprayed tomatoes.

PROVED BY YEARS OF ACTUAL FIELD USE!

For years, growers all over the country have sprayed their tomatoes with BLOSSOM-SET to get early tomatoes and tomatoes of superior quality. An Illinois grower added BLOSSOM-SET to his fungicide sprays; his tomatoes ripened 3 weeks earlier, brought premium prices. On a farm in Northern Kentucky, first pickings from a BLOSSOM-SET-sprayed field yielded 612 lbs. per acre compared to only 136 lbs. per acre from a comparison field.

EASY TO USE!

BLOSSOM-SET is the hormone which can safely be sprayed on the whole plant. Just dilute with water and spray when the first blossoms open up. Combine with insecticide or fungicide sprays for greater economy of application. Use hand, tank, or power sprayer. The 8 oz. concentrate makes 50 gallons and treats 3 to 5 acres.



ORDER FAMOUS BLOSSOM-SET TODAY!

The original tomato hormone spray that stops blossom-drop, makes blossoms set fruit!

8 oz. Agric. Conc. (makes 50 gals.) \$5.95
1 pt. (makes 4 gals.) 1.75
for 1/4 acre
12 oz. BOMB for 100 plants... 1.79

at your dealer or direct from

Science Products Company, Inc.

1230 E. 63rd St. Dept. A 26
Chicago 37, Illinois
(No stamps, No C.O.D.'s—please)



After several years of drought, irrigation is becoming more popular with Kansas sweetpotato growers. On these test plots at Kansas State College, irrigation doubled yields (up to 300 bushels per acre).

The SWEETPOTATO Moves North

**With irrigation and ideal growing conditions
Kansas is becoming an important sweetpotato state**

By HERB LEE

THE sweetpotato is on the way to becoming a major vegetable crop in Kansas. In fact, the Midwest may eventually offer strong competition to the major sweetpotato growing areas of the South, according to Dr. R. A. Schroeder, chairman of the University of Missouri horticulture department, and James Greig, vegetable researcher at Kansas State College.

Plantings are on the increase, and here's why:

- 1) Kansas has ideal conditions for growing sweets. The river valleys have an abundance of sandy soil and the necessary high summer temperatures.
- 2) Insects are not as much a problem as they are in the South, because of the colder winters.
- 3) Fall temperatures are more favorable for storing sweets in the Midwest than in the sweetpotato areas of the South.
- 4) A ready market is available.
- 5) Adequate water is available for irrigation.

The Kansas sweetpotato can measure up with those produced in any other area of the United States, Greig says. They are not advertised as well, however. The Kansas Sweetpotato Growers association, formed several years ago, has developed a No. 1 label for Kansas sweets. About one-third of the growers in the state belong to the association, of which Bernard Lohkamp, Wichita, is president.

Kansas growers get premium prices for sweets that have been properly cured and stored—up to \$5 a bushel. So far, the entire crop has been sold before Christmas when the price has been \$2.50.

The 1951 flood destroyed many farm storage houses and growers

have been reluctant to rebuild. Many thought it a big gamble even to plant sweets the year after the flood. However, crops planted on one to 5 feet of sandy loam flood-fill produced yields up to 400 bushels an acre in 1952.

Irrigation Ups Yields

Arthur Creton, one of the major growers in the Kansas City area, has a 250-acre truck farm, 40 to 65 acres of which he plants to sweets. His 40-acre irrigated field yielded 300 bushels to the acre. He stored 6,000 to 7,000 bushels, but even then sold the last of his crop by December 10. Truckers bought a large per cent of the crop and he sold his No. 2's to local stores.

Creton had no trouble with soil pox as did many growers. He rotates his sweetpotato crops. In the past he has planted as much as 200 acres to sweets. He admits soil pox control would encourage him to boost production. He plants Nemagold and Kande varieties.

Another grower near Kansas City, William Caldwell, got over 200 bushels to the acre from his 17-acre field. He irrigated only once, yet had a crop of good enough quality to gain a direct market to a chain store. Caldwell would like to plant more sweets, but he feels rotation is important. Also his melon crop requires a large part of the sandy soil on his farm.

John Britt, Manhattan, irrigated a 15-acre field and harvested over 200 bushels per acre. He sold the No. 2's at digging and stored the premium spuds. Howard Keintz, Manhattan, also got over 200 bushels by irrigating. He trucked his entire crop to Nebraska and sold it before Christmas.

Rollie Clemence, Abilene, raises sweets on several farms. He had 30 acres near Manhattan and several

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\$1.75 each
copies; \$1
for 50 cop
\$40 for 20
Potato A
Nichol Ave

acres on his home farm. He also buys sweets from other growers. In his packing plant in Kansas City machines are used to wash and brush the sweets.

Irrigation is a big factor in Kansas. In tests at Kansas State College, irrigation has doubled sweetpotato yields. Fertilizer tests proved 50 pounds of potassium applied to the acre gave good results. The most common varieties grown in Kansas are Kande, Nemagold, and Orlis. Goldrush has been a top yielder in college tests.

Soil Pox a Problem

The big factor limiting a rapid increase in sweetpotato production in Kansas is soil pox, accentuated in some areas by the 1951 flood. Crop rotation offers partial control until plant pathologists find a better solution.

The hot spot for pox is the area hit hardest by the flood near Kansas City. Soil pox reduced the yield on Jim Stafos' 30 acres, but even then he got good prices for second-grade sweets on the Kansas City wholesale market. Stafos irrigates and has adequate storage facilities.

Otto Wendt also had some soil pox, but sold his 15 acres of sweets at his roadside market and on the Kansas City wholesale market for reasonable prices.

Soil pox caused almost complete loss of some 35 acres of sweets on the Frank and Herman Theden farms. Herman Theden, a grower for some 40 years in the Kaw Valley said, "We are afraid to plant sweets on any of our soil that was flooded. The soil seems to be poisoned."

Kansas state researchers believe the flood may have brought into Theden's soil an excess of toxic salt materials besides the pox.

In the belief that the problems will be solved eventually, growers are increasing their acreages and processors are seeking select locations in the major production areas. THE END

1956 POTATO HANDBOOK

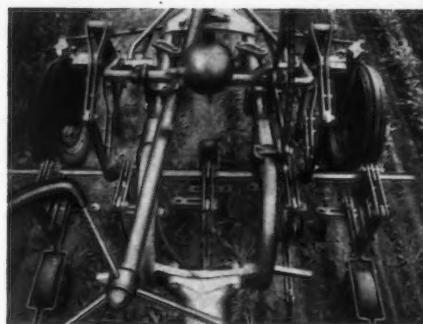
NOW available to growers is the official 1956 Potato Handbook published by the Potato Association of America. The 76-page book is devoted primarily to seed certification, with over 20 articles by nationally recognized authorities. Included is a Buyers' Guide for the potato grower and handler.

Price is \$2.00 for single copies; \$1.75 each for 5 copies; \$1.50 for 10 copies; \$1.25 for 25 copies; \$1.00 for 50 copies; \$.50 for 100 copies, and \$.40 for 200 or more. Order from the Potato Association of America, Nichol Ave., New Brunswick, N.J.

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One man can do the work of ten men with hand tools...reduce your cost...keep your work on schedule.

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when you want, and
without the
headaches of hand
picking labor."

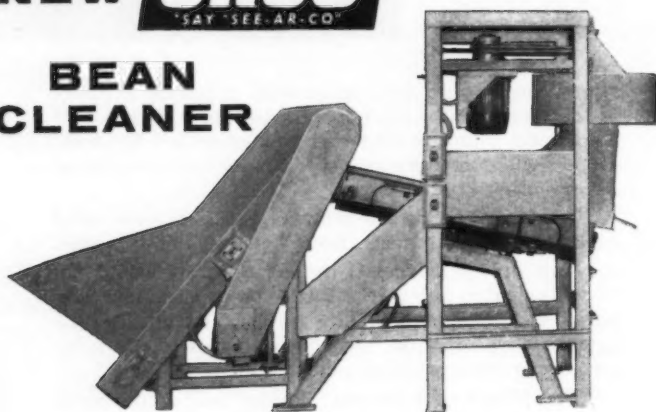


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beans for delivery
to the processor
or fresh market."

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Here's how to lower the cost and up the profit of your operation with CRCO.

CRCO's completely automatic Mechanical Bean Picker simultaneously picks two rows on 36-inch centers and can also be used for second or third pickings after hand picking. CRCO's new Bean Cleaner then cleans them to the standards of both processor and fresh market. Write today for complete information.



EARLY TOMATOES

(Continued from page 11)

At first, sucrose sugar was used. It was then found that dextrose sugar, which costs a little less, could be used, and this in some cases gave even better responses.

If size and weight of fruits can be increased during dark weather, it surely will pay growers of early tomatoes to use the new activated hormone. One spring, the use of activated hormone sprays in a commercial plastic greenhouse produced an extra heavy crop of large tomatoes which sold at the premium price of 43 cents a pound, wholesale. We have not been able to repeat this price nor the high yield, but definite responses have been secured every year since then with activated hormone sprays.

These sprays are put on with a good fungicide, and any recommended insecticide can be added if needed. This one spray then controls disease, keeping the foliage green, controls insects, and causes an increased set of large, heavy fruit. While the fungicide tends to decrease early maturity, the hormone offsets this tendency by hastening fruit development.

Overcomes Nitrogen Overdose

Besides largely overcoming the delaying effect of fungicides on maturity, the activated hormones also will overcome to a large extent the effect of overdoses of nitrogen. This is especially true on the setting of tomatoes on high-foliage plants. However, too much nitrogen often causes blotchy ripening from excessive foliage effects. I am certain this is restricted also by activated hormones, although it is not entirely stopped, especially if nitrogen overdosage is high.

Activated hormones also reduce the necessity of paying so much attention to pollination in greenhouses, and the setting of such poor-setting varieties as Ponderosa becomes more certain in adverse weather when activated hormones are used.

This activated spray has given response on lima beans. It has not been tried on other crops yet, but should give responses with all fruiting crops.

Activated hormone sprays are not yet being marketed commercially (patent is pending; applied for by Kentucky Research Foundation) but can be purchased by writing E. M. Emmert, Department of Horticulture, University of Kentucky, Lexington 29.

THE END.

Are you planning a roadside market? Working drawings for an attractive, easy-to-build stand are available for \$1.50 from AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

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LE GROWER



Bags for "Kimberly" potatoes designed and supplied by Dobeckmun Co., Cleveland 1, Ohio.

"We can pack at lower cost"

That's only one of the advantages reported by J. H. Henry Produce Co., Kimberly, Idaho, after shifting to packaging in film made of BAKELITE Brand Polyethylene.

In addition, Jim Henry tells us, "We've been able to get new business on both 5- and 10-lb. bags. Housewives remember the bright clean printing and reorder by brand."

Potatoes, carrots, apples, oranges . . . all sorts of produce keeps longer, stays fresher, tastes better and sells better in film made of BAKELITE Polyethylene. Find out yourself. Call your packaging supplier.

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Celery being bleached in the Borgesi Brothers' fields at Meuthen, Mass.

Plant SAMPLE Rows

Borgesi Brothers, who cater to the Boston market, don't miss out on new varieties—but they try them out first to make sure they're suited to their conditions

By CHARLES L. STRATTON

TRY out new seeds under your own growing conditions and keep records so you'll know where you stand, suggest John and Sam Borgesi of Meuthen, Mass.

Borgesi Brothers raise some 40 acres of vegetables for the Boston wholesale market and do their own trucking. They grow a wide variety of fine vegetables, including Summer Pascal celery going out under their Borgesi Brothers' label, their own selected strain of World Beater Peppers, and carrots bagged under their JOE & GEARY label. About the only vegetable they don't raise is radish, and this has been eliminated due to the work involved in bunching.

Their help problem is nicely solved by the use of a small crew of Puerto Ricans throughout the season. When the help goes home for the winter around the middle of November, the Borgesis spend the winter cleaning up the fields and equipment, hauling hen manure, and doing the many necessary chores without outside help.

Around February 1 they start the seeds in their hot water hotbed. "From then on," Sam says, "there's no more slack as we set out plants just as soon as possible to hit the early markets."

Just as they don't want to miss out on something good, they don't want to get stuck in regard to new types of seeds and varieties. Their method is to try the seeds recom-

mended by seed salesmen on a small scale. They put in a couple rows alongside their old favorites and grow them under identical conditions. Records are kept on all plantings and varieties.

Carrots Are Bagged

Some 15 acres are planted to the Hutchinson and the Emperor carrot varieties. For four years the Borgesi Brothers have been bagging carrots under their own label. Last year they tried a few bunched carrots but they claim there is no market for this loose pack. Sam says, "The housewife once handled the produce, then wanted the tops taken off. Now she requires a perforated poly-



Sam Borgesi shows the chunky type of butternut squash grown from selected seed. The Borgesis prefer this type to the old, long butternut squash, because it packs better—both in the box and in the consumer's shopping bag.

AMERICAN VEGETABLE GROWER

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ethylene sack with carrots of uniform size. Another drawback is that the stems draw the juice out of the carrots and make them rubbery.

"We're better off bagging carrots. We grow a medium carrot especially for a brand pack. Half the crew is bringing carrots in from the field while the other half is washing, weighing, and bagging in the field house."

Both pink and white sacs are used, but there is no difference in quality. "Bagged carrots look better than bunched carrots, keep better, and have a better appeal to the customer. The housewife also picks up a clean bag. Though the bags are perforated, the carrots will spoil fast once the heat gets in. We ice all carrots in hot weather. Our big carrots are boxed and sold directly to the restaurant trade," the Borgesi brothers add.

Celery Is Iced

Celery is always iced as they claim that's what the customer wants. If it isn't iced, hot weather will cause it to wilt. Packaging under their own label, they can't afford to take chances on losing customers.

They grow about 3 acres of Illinois World Beater peppers. For seed only the top grade peppers with four lobes are allowed to ripen.

The Borgesi land is a light, clay loam beside the river. To avoid drowning out early season crops they plant seed in beds with a gully between every fourth row for the water.

Cultivating is continuous and they use the Allis-Chalmers Model G, the cultivator with the engine in the rear, which they claim is excellent for doing close work.

The Borgesi Brothers put out a high quality product that is much in demand in the Boston wholesale market. Through the use of their own strains and tests, they raise vegetables that are "right" for their conditions. THE END.

MERCHANDISING ONIONS

"**M**ERCHANDISING Yellow Onions in Retail Food Stores," by Lloyd H. Davis, tells how various factors affected yellow onion sales in New York state retail stores.

For example, in a group of chain supermarkets in Buffalo, onion sales were about 25 per cent higher when bulk onions were offered with onions in 5- or 10-pound bags, compared to the commonly used 3-pound bags.

Growers can obtain a copy of A. E. 1014 by writing to the Department of Agricultural Economics, Cornell University, Ithaca, N.Y.

FEBRUARY, 1956

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For over 80 years Planet Jr. has concentrated on the development of planting equipment, specializing on the planting of seeds in rows.

Now Planet Jr. is proud to recommend the 9192X to growers who rely on diversified planting for continuous cash income. The 9192X Seeding Unit handles seeds from finest grasses and vegetables to bush limas—and row-plants so accurately it is guaranteed to drop a prescribed number of seeds per foot—thereby saving both seed and money.

In addition, the Planet Jr. No. 9192X Seeding Unit is simple to clean, easy to fill and is built for quick changing of seeding plates—so it saves time, work and energy.

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STANDARDS—there are a wide variety available for mounting 9192X seeder to your tool bar—either front, rear or side-offset.

OPENING PLOWS—a large selection with planting range from 0 to 3½ inches in depth—from 1 to 6 inches in width of furrow.

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All the reagents and apparatus necessary for a complete chemical diagnosis of the soil; plus tissue tests for Nitrates, Phosphorus and Potassium. The apparatus will last indefinitely.

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All the reagents and materials necessary to make 100 to 300 tests for the following plant growth factors: Nitrates, Phosphorus, Potassium, Calcium, Ammonium, Acidity; plus tissue tests for Nitrates, Phosphorus and Potassium.

FARM KIT

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100 Tests for the following five growth factors: Nitrates, Phosphorus, Potassium, Ammonium, Acidity; plus tissue tests for Nitrates, Phosphorus and Potassium.

The SIMPLEX Soil Tester is based on scientific methods devised at Michigan State College by Dr. Charles H. Spurway. You should have the SIMPLEX Soil Tester to increase soil productivity and your profits.

Chemical solutions for all SIMPLEX Soil Testers may be secured individually or in mixed lots.

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**The EDWARDS
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JUNIOR GROWERS USE MODERN PRODUCTION METHODS

Contest winners in NJVGA projects
grew top yields and top quality crops

ANOTHER eventful and rewarding convention has gone down in history for the National Junior Vegetable Growers Association. The 400 junior growers who took part in the recent 21st annual meeting have fond memories of the fascinating old-new city of New Orleans.

But of most importance to these junior growers as well as to the state leaders, extension specialists, and county agents who guided them in their activities in 1955 and who accompanied them to the convention, were the contests. These contests climaxed the year's activities as well as the four-day convention.

Production-Marketing Contest

The convention proved particularly rewarding to 20-year-old Stanley J. Pieczarka, Jr., Agawam, Mass., who was crowned National Champion in the Production and Marketing contest. This contest stresses good growing and marketing practices. Forty-four teams from 20 states competed.

Stanley's prizes included Ammo-Phos fertilizer provided by Olin Mathieson Chemical Corp. and a seed certificate from the W. Atlee Burpee Co.

Stanley, who is a senior at the University of Massachusetts, Amherst, in 1955 successfully managed his father's 30-acre farm, of which all but 1½ acres are in vegetables. Sweet corn, tomatoes, peppers, lettuce, butternut squash, and cucumbers, in the order named, were his important crops. He grows his own first-class plants in cold frames and hotbeds but has a greenhouse under construction.

He used modern cultural methods, including soil fumigation. Stanley received nearly \$7,000 for his top-quality vegetables, most of which were sold wholesale.

Special Project

A special canning crops project was included as part of the Production and Marketing contest. Junior growers from seven states participated in this pilot program which is to be expanded in 1956. The contest was initiated by the National Canners Association. National winner was 15-year-old William Rockefeller, Phelps, N. Y. He received as his award a paid trip to the National Canners Association Convention in Atlantic City.

Using the latest cultural methods on his 2-acre project, William harvested 81,230 pounds of beets or an average yield per acre of over 20 tons. This yield is in contrast to the 11.4 tons per acre produced by his father, Paul Rockefeller, who also raises beets for canning. William's beets graded 40.7 per cent No. 1, 32.4 per cent No. 2, and 26.9 per cent No. 3, accounting for a profit of \$1,020.68.

Irrigation proved vitally important in producing his big yield, particularly during an 11-day period in July when water was applied nine times. Soil tests were made for soil improvement.

Demonstration Contest

Winners in the Demonstration Contest, which is divided into Production, Marketing, and Use sections, were:



Officers and district directors elected at the 21st annual NJVGA convention are shown above. Reading from left to right: District directors Clarence Chappell, Jr., Belvidere, N. C., and Nadine Thompson, Massena, N. Y.; vice-president, John Porter, Baldwinville, N. Y.; secretary, Gwendolyn Fair, Marks, Miss.; president, Jack Armstrong, Springfield, Ill.; district directors, Betty Lou King, Caro, Mich., and Jack Baringer, Hathaway, Mont.

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Michael Andrew, Gorham, Maine, who conducted a demonstration entitled "Insect Pests of Corn" in the Production division. Second place winner was Peggy Handy, Sodus, Mich., with her entry, "Tomato Holiday," in the Use division. E. Frederick Hyde, Connellsville, Pa., in the Marketing division, showed how to



Michael Andrew, Gorham, Maine, won top award for his demonstration, "Insect Pests of Corn."

plan and operate a successful roadside market. He placed third.

Judging, Grading, Identification

The Judging contest consisted of identifying varieties, diseases, insects, grade defects, and weeds, as well as judging carrots, onions, and potatoes for quality and grade. The coveted prize for the highest scoring team in this difficult contest is the Snyder Trophy, a beautiful plaque presented by NJVGA adult advisor Prof. Grant B. Snyder, University of Massachusetts.

The team from Indiana scored 2,796 points out of a possible 2,970, to win the trophy. Members of the team were Duane and Paul Dean Van Wagner and Ken Swogger. Paul topped all other contestants in the Judging contest.

New Project

During 1956, with the support of The Dow Chemical Company, NJVGA will include an educational competition in its section on Production and Marketing emphasizing control of soil pests by soil fumigation. Details of this contest, together with entry forms, are to be distributed through NJVGA state leaders in the near future.



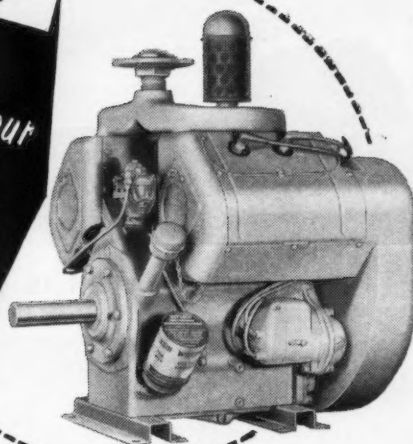
A bi-monthly page for the younger generation of vegetable growers and their national organization, the National Junior Vegetable Growers Association. For information write Grant B. Snyder, French Hall, University of Massachusetts, Amherst, Mass.

This is the
**ENGINE for your
SPRINKLER
IRRIGATION
SYSTEM**

the model
VG4D

V-type 4-cylinder 36 h.p.

WISCONSIN HEAVY-DUTY Air-Cooled ENGINE



For continuous load, high capacity pumping service it is a self-evident fact that an engine must have special in-built, structural characteristics as insurance against power failure at a time when *water on the land* is most urgently needed. The Wisconsin Model VG4D has been "Tailor-Made" to meet this need. It's built for Heavy-Duty service.

To provide maximum protection and to assure lowest cost maintenance and long engine life, the Wisconsin Model VG4D is equipped with Stellite Exhaust Valves and Valve Seat Inserts, together with positive type Valve Rotators, replaceable Valve Guides, and Automatic High Temperature Safety Switch.

The above features adapt this engine ideally to arduous day and night irrigation service. In addition, ALL Wisconsin Engines have tapered roller bearings at BOTH ends of the crankshaft, rotary type high tension OUTSIDE magneto equipped with Impulse Coupling for easy starting at low cranking speeds, *plus* dependable AIR-COOLING at temperatures up to 140° F., and positive lubrication.

For sprinkler irrigation service, you can't do better than to invest in a correctly engineered, properly installed complete pumping unit, powered by a Wisconsin HEAVY-DUTY Air-Cooled Engine. See your local dealer . . . and write for folder S-181.



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Cabbage, Onions, Tomatoes, Pepper, Collards, Broccoli, Brussels Sprouts, Cauliflower, Eggplants, and Sweet Potatoes.

Best strains of leading varieties. Shipments catering to market gardeners' demands. Free price list.

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WITH **KUR-MOR**

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50,000 BTU Input
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Normal rainfall is **NOT** enough...



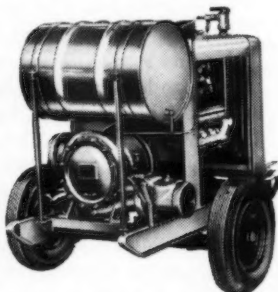
For top yields, make **SURE** with
GORMAN-RUPP IRRIGATION PUMPS

In 1955 most areas, country-wide, saw normal rainfall. But normal rainfall was *not* enough.

For instance, in a lower lakes region, there was a crucial 18-day summer period when *no* rain fell—five other periods, 11 to 19 days each, when there was no *effective* rainfall. Crops were noticeably retarded.

Sprinkler irrigation in *any* year will assure soil moisture content for finest yields. And Gorman-Rupp Irrigation Pumps—backed by the combined experience of more satisfied users than any other make—offer the sure means of making your system the best for your individual needs.

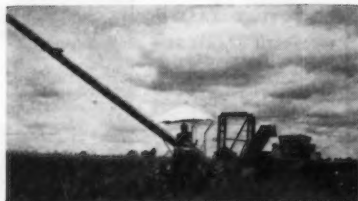
A Gorman-Rupp Irrigation Pump Dealer near you is prepared to provide a scientifically engineered plan for your farm, also irrigation financing counsel and assistance. See him now.



Completely engineered units with lever-controlled automatic check valves, removable end plate, shaft seal under suction, large drum-type fuel tank—all with operational safety features. P. T. O. Driven: 3" and 4". Engine Driven: 80 GPM @ 80 lbs. to 1250 GPM @ 125 lbs.; for ditch irrigation, 3000 GPM @ 25 ft.

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MELON QUALITY

WE have been successfully growing Delicious and Delicious 51 melons for some years and find them to be of very high quality, in spite of what many experts say.

All our production is retailed at the farm, which removes the shipping problem. However, our experience has been that the recommended high-quality melons are definitely lacking in flavor and sweetness. In four out of the last five years we have destroyed such melons (by disk-ing) to make sure the pickers would not harvest them by mistake.

"What flavor there is," one of my friends has said, "is bad."

The reasons for this are not clear. I can get excellent-looking fruit of such varieties as Honeydew and Persian melon, but the quality is nothing less than frightful. I think there must be some tie-in with the fact that our mean temperature is remarkably low, even though we have a lot of bright sun. Also, since our land is sandy, we must irrigate three or four times a season.—*John Wickham, Dam Meadow Farm, Cutchogue, Long Island, N.Y.*



Transplanting time is cut in half with this "melon setter" developed by Wickham. One man sets plants, the other hotkaps. Machine opens up rows, places fertilizer in bands, and closes earth around banded plants. Men ride on seats at rear.

PRE-PEELED POTATOES

PRE-PEELED potatoes appear to be a big hit with the restaurants and institutions which are the principal users. During 1954 it is estimated that the 100 pre-peeling plants throughout the country used over 10 million bushels of potatoes. The year before they had used only 3.2 million.

Products turned out by these pre-peeling plants include French fried sticks, crinkle cut slices, diced potatoes for salads and canning, slices for hashed browns, and whole potatoes for boiling and mashing.

Peeling charges vary from 3 to 6 cents per pound, and skins are removed by the abrasive, caustic, or steam method. The pre-peeled spuds are generally packed in polyethylene or treated paper containers.

AMERICAN VEGETABLE GROWER

**How Flo
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By WIL
Florida Ag

ARE you residu of compar the vegeta the genera lather abou years.

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How Florida Tackled Its

Pesticide RESIDUE Problem

Tomatoes can now be harvested within three days of last spray application, cabbage and celery 21 days

By **WILLIAM G. MITCHELL**
Florida Agricultural Experiment Stations

ARE you worried about pesticide residues? If so, you have a lot of company. Government agencies, the vegetable industry as a whole, and the general public have been in a lather about such residues for several years.

The federal hearings on pesticides and their residues in 1950 pointed up the lack of information on this vital subject for the Florida Agricultural Experiment Stations. While there was some information available from other states on residues, these were usually not applicable to Florida because of differences in climate, rainfall, crops grown, and the like.

The Florida stations began accumulating data on amounts of toxic residues left on fresh vegetables going to market. The horticultural department set up a pesticide residue laboratory in 1952, and hired Dr. R. E. Waites, an entomologist, and Dr. C. H. Van Middeltem, a biochemist.

Dr. Van Middeltem says the main problem initially was to know which insecticides to study and on what particular crops. Florida grows commercially about 30 different vegetables. Besides, there are more than 15 different insecticides either recommended or being used for insect control on these crops.

The scientists chose to concentrate on a few of the most widely used insecticides and on the vegetables having the most commercial importance. Of these crops, they planned to work first on the leafy crops such as celery and cabbage, since more residues were likely to be found on these than on smooth-surfaced vegetables.

Since 1951 they have conducted a total of 65 different field experiments on insecticide residues on fresh vegetables. Vegetables tested include cabbage, Chinese cabbage, snap beans, tomatoes, turnip greens, mustard greens, lettuce, spinach, broccoli, escarole, sweet corn, Southern peas, okra, Irish potatoes, strawberries, squash, cauliflower, and celery.

Insecticides tested include toxaphene, chlordane, DDT, dilan, parathion, malathion, EPN, Diazinon and Systox.

As a result of these tests, the scientists have set up a list of suggested time intervals between the last insecticide application and harvest of fresh



Dr. C. H. Van Middeltem (left) determines parathion residues colorimetrically with the spectrophotometer at the Florida Experiment Stations, while Dr. R. E. Waites records the results.

vegetables. These range from as little as three days (with dilan, parathion, and EPN on tomatoes) and five days (with DDT and parathion on sweet corn), to 21 days (with toxaphene on cabbage and celery and DDT on Chinese cabbage) and 30 days (with Systox on celery). Dr. Van Middeltem states that this work with Systox is still preliminary and that future experiments may lead to shortening this interval materially.

From the standpoint of the average grower, these time interval recommendations are probably the most tangible and practical result of this Florida research to date.

Another result of this research is that Drs. Van Middeltem and Waites can say with assurance that Florida vegetable growers can get protection from insects all season—and without danger of exceeding Miller Bill tolerances—by using some suitable combination of insecticides.

For example, on cabbage, a grower might use DDT or toxaphene up until 14 to 21 days before harvest. Then he could use parathion or malathion—if these materials were effective against the insect in question—until seven days before harvest. Toxaphene could be used on snap beans until 14 days before harvest, then parathion or malathion could be used until three days before harvest.

One problem of the pesticide residue studies in Florida has been that of adapting and modifying available commercial methods for residue determination on the vegetables grown in Florida. Drs. Van Middeltem and Waites are continually adapting their methods as new methods are discovered.

THE END

MALATHION

kills

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on 40

crops!

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MALATHION GROWER'S GUIDE

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AGRICULTURAL CHEMICALS DIVISION
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Developers and Producers of
Malathion and Parathion Technical

NEW FOR YOU

—to increase your profits

FAS-TIES



California growers are having splendid success with a new vegetable tie. The new tie is manufactured by laminating polyethylene to paper and wire, comes in $\frac{1}{4}$ and $\frac{1}{2}$ inch widths, precut to lengths suitable for tying bunched vegetables or supporting plants on trellises. The ties can be printed with your brand name, and full details are yours by merely writing Jerry Bower, Plas-Ties Company, P. O. Box 27, Santa Ana, Calif.

To Help You



A new, modern seed warehouse has just been completed by one of the leading seed manufacturers. The new building will store under ideal conditions 8 million pounds of seed. The plant's modern seed cleaning machinery and the latest germination testing equipment will mean the best in seeds for growers. Purchased by the Corneli Seed Co., St. Louis, Missouri, the company invites you to go through their new plant when you are in Twin Falls, Idaho.

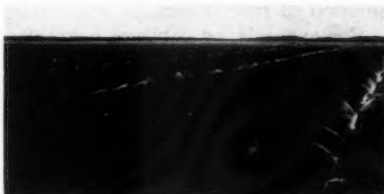
Insure Germination

New England growers are reporting outstanding results by using nutrient-treated bands. These new bands are made in two types . . . one that disintegrates after transplanting, and the other which is designed for quick removal at transplant time. Vegetable plants can be handled

more economically, and commercial growth is assured. You should use these bands this spring. To get full facts, write Bird & Son, Inc., Dept. AV-12, East Walpole, Mass.



Big Irrigation



This dramatic picture shows the biggest irrigation system ever sold. Potato grower Bryan Smith in Bakersfield, Calif., tells us that the new system costs 52 cents per acre to operate—this cost covers labor only. The system is portable and employs the popular and economical Rain Bird sprinklers. Manufactured by Portable Aluminum Irrigation Company, Will Kinney will be glad to help you. Their address is 1525 W. Vista Way, Vista, Calif.

Find Out



The ability of your soil to produce quality, profit-making vegetables depends primarily on the balance of plant nutrients available. It is folly to buy expensive seed, chemicals, and equipment if your land cannot produce. The quickest and easiest way to find out is with a precision soil-testing outfit. We have used the one pictured above with spectacular success. You'll find it to be a cheap, worthwhile investment. Why not get full details by writing Sudbury Laboratories, Box 267, South Sudbury, Mass.

Early Tomato



Western New York tomato growers are enthusiastic about a new hybrid tomato which bears large, early fruit. The fruit is smooth, solid, and meaty with a rich red color. Why not write to Joseph Harris Co., 72 Moreton Farm, Rochester 11, N.Y., and ask for details on Moreton Hybrid tomato.

AMERICAN VEGETABLE GROWER

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Try this glistening sparkle to display. Se

Write W. AT

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Add to your VEGETABLE combination for GROWER best results every call pa you regardle order or a VEGETABLE

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ActivO is Na for best crop organisms, BIOTICS, (tillizer'') Ju better potato pic. for 0-1 THE ACTIVO

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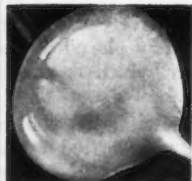


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Since 1915 Manu 20% Colla Or

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Burpee
White
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SEEDS**

Try this long-keeping, extra delicious, glistening pure white radish. They add sparkle to any roadside stand or market display. See how fast they sell!

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ARE YOU A SEED SALESMAN?

Add to your income by selling AMERICAN VEGETABLE GROWER. It's a logical combination for AMERICAN VEGETABLE GROWER will help your customers get the best results from the seed you sell them. *Make every call pay!* This means additional cash for you regardless of whether you sell a seed order or a subscription to AMERICAN VEGETABLE GROWER.

Write today for our liberal, nursery agents' plan. Address:

EDWARD MEISTER, General Manager

AMERICAN VEGETABLE GROWER
Willoughby, Ohio

MORE AND BETTER POTATOES

Activo is Nature's own way of energizing soil for best crop yields with billions of friendly organisms, hormones, vitamins, minerals, BIOTICS. (Users report "Better than fertilizer!") Just apply to seed. More bigger, better potatoes or your money back. Trial pkg. for 9-18 bu., \$2.95 p.p.d. Dealers or THE ACTIVO COMPANY, Bridgeton 43, Ind.

Certified Vegetable Plants

Certified Tomato, Pepper, Onion and Cabbage plants. All leading varieties, including the Hybrid Tomato. Satisfaction guaranteed. Write for free pamphlet.

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FERTO-POTS Millions Used Plant Eats Pot BE A TWO TIMER



Grow two or three crops per year off the same ground by having FERTO-POTTED plants well started and ready to set out in the field as soon as the first crop is finished. Also sell FERTO-POTTED plants to gardeners and growers.

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|--------|---------|--------|------------|
| 2" | pot 100 | \$2.50 | 250—\$4.50 |
| 2 1/2" | pot 100 | 2.75 | 250—5.00 |
| 3" | pot 100 | 3.25 | 250—5.75 |

Also bulk packing and for C/L users.
At your dealer or direct.

ALLEN COMPANY

Since 1915 Pittstown, N.J.
Manures, Peats, Tankage, Bone.
20% Colloidal Phosphate \$18.00 ton C/L/
Organic 5-10-5; 5-10-10; etc.

NEW PLANTERS

(Continued from page 13)

will accurately band fertilizer for row crops without fertilizer injury.

The Iron Age and Ferguson planters are good examples of two-row planters designed for adequate fertilizer placement. Fertilizer is placed 3 inches to the sides and approximately 2 inches deeper than the seed with the Iron Age planter from the large fertilizer hoppers. Auxiliary hoppers with the split-boot attachment have been added to this planter to place a small amount of fertilizer approximately 1/2 to 1 1/2 inches to both sides and above the level of the seed.

This planter gives a positive placement of fertilizer and seed under all conditions except on extremely stony fields. As much as 2,000 pounds of 8-16-16 fertilizer per acre has been applied through the large hoppers on dry beans with no detrimental effect because of fertilizer injury. Thus, this planter may be used for any amount of fertilizer which might reasonably be recommended for row crops.

The Ferguson planter applies fertilizer on one side of the row and is adjustable for depth of placement. Positive placement of seed and fertilizer is not always obtained because the fertilizer and seed are both driven from the press wheel which has a tendency to slide if the fertilizer shoe is placed deeply in firm soil. Thus, under certain conditions, the fertilizer may not be placed as deeply as desired in order to keep sufficient weight on the press wheel to turn the fertilizer and seed mechanism.

Several 4-row planters which place fertilizer 2 to 3 inches to one or both sides and 1 to 2 inches deeper than the seed are available.

New Planters

A new 2-row planter of excellent design has been developed by the agriculture engineering department at Michigan State University and is currently manufactured by Farmcraft Manufacturing Company, Fort Wayne, Ind. Fertilizer is placed by means of a rolling colter with attached fertilizer tubes which are flattened along each side of the disk. On one side of the disk the fertilizer is carried to a depth of 6 inches and on the other side to a depth of 3 inches. The fertilizer hopper is divided so that a different analysis of fertilizer may be placed at each depth. Also, separate calibrations can be made for deep or shallow bands of fertilizer. The fertilizer mechanism

(Continued on page 42)

MALATHION

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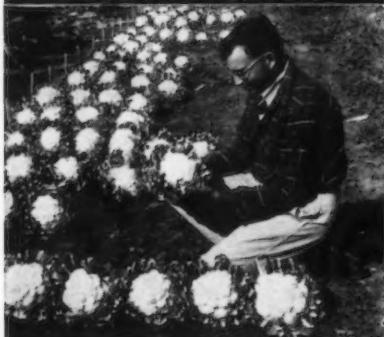
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Snowball Imperial A Harris Introduction

Matures Over a Short Period

(An advantage for cauliflower specialists)

Excels All Others in Quality—Color—Uniformity.

Cuts Out Practically 100% Perfect Heads.

Produces Good Midsummer as well as Fall Crops.

Best Snowball or Erfurt on the Market Today.

Hot Water Treated for Your Protection.

Write for our **FREE Market Gardeners' and Florists' Wholesale Price List.**

JOSEPH HARRIS CO., INC.

76 MORETON FARM, ROCHESTER 11, N. Y.

PALOMAR CUCUMBER DISEASE RESISTANT

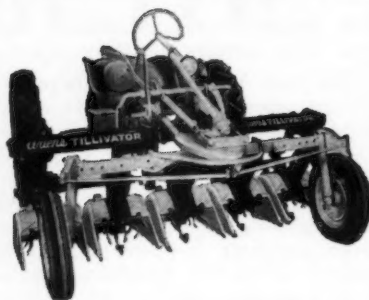


Introduced the first time in 1956. Resistant to downy mildew. Extra long, slender, dark green fancy fruits. Few crooks and culls. High yielding. Proven in many tests.

Our new catalog lists 87 selected strains of leading vegetables. Satisfied customers in 40 states. Your **FREE CATALOG** now ready.

OTIS S. TWILLEY
Certified Seed Grower
Salisbury, Maryland

CUT LABOR COSTS 50%



Ariens

Tillivator

Engineered for multiple row rotary tillage cultivation. Kills 2, 4, 6, 8 or more rows of weeds at a time. Easy to operate. Accurate depth control. Cuts labor costs 50%—or more! Write for details today!

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WHAT'LL IT MIX WITH?

1956 completely revised chart

That is the important question in economical spraying. The compatible nature of spray materials is mighty important in safe and effective spraying and **AMERICAN VEGETABLE GROWER** has produced an ingenious

SPRAY COMPATIBILITY CHART

which tells at a glance just what materials will mix safely. Printed in three colors, mounted on Bristol board paper, it is an accurate guide in the safe and successful mixing of all spray chemicals.

Better send for a copy—25¢ each
To foreign countries single copies—75¢ each

Quantity Prices on Request

AMERICAN VEGETABLE GROWER
Willoughby, Ohio

Enclosed is 25c. Send Compatibility Chart to:

Name

Address

City State

NEW PLANTERS

(Continued from page 41)

is driven by a separate paddle wheel which insures positive placement. Seed is very accurately placed by the Cole double hopper which is driven by the press wheel.

Preliminary tests with this planter in New York in 1955 indicated a definite advantage for deep placement of fertilizer for dry beans. In the plot where the fertilizer was placed approximately 6 inches deep, the beans were considerably greener and made more growth during a prolonged drought of six weeks than when the fertilizer was placed 2 inches deeper than the seed with other conventional planters.

An experimental 4-row corn and bean planter manufactured by the John Deere Company which was used for planting a sizable acreage of beans in New York in 1955 shows considerable promise.

This planter is mounted on a ridged, well-braced frame giving

VEGETABLE GROWERS!

We are looking for factual accounts of grower experience in overcoming problems in vegetable production and marketing. Send letters and, if available, photos. Regular author payment. Address contributions to Richard T. Meister, editor, **AMERICAN VEGETABLE GROWER**, Willoughby, Ohio.

much greater stability than for comparable 4-row planters now in production. The fertilizer and seed applications may be adjusted independently, both laterally and vertically, for placement of fertilizer on one side of the row. Positive placement of fertilizer is obtained by driving the fertilizer mechanism directly from the supporting wheels. The seed mechanism is driven by a zero pressure tire on the press wheel which gives positive placement of seed and good firming of the seed bed. Modifications of the fertilizer applicator are being made to allow better placement of fertilizer in stony fields.

The John Deere precision pea and row crop planter was used to good advantage in planting peas and beans in New York in 1955. Fertilizer is applied by means of knives attached to a strong counter spring. Positive placement of seed and fertilizer is obtained by driving these mechanisms directly from the supporting wheels. Fertilizer is placed at one side and deeper than each row of peas, which is ideal as is the case with beans and corn.

One of the important features of

AMERICAN VEGETABLE GROWER

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this planter is the precision mechanism for metering seed. This consists of a series of wheels which revolve in a vertical position so that pockets of the proper size for each seed lot pick up the seed at the top of the rotation and drop it as it is carried to the underside of the wheel.

The Ontario Drill Company converted a standard drill with a few special attachments to apply fertilizer on both sides of the row, 3 inches from the seed and 1 inch to 5 inches deeper than the seed. A considerable acreage of row crops was planted in New York with this drill in 1955 with excellent results, especially with the fertilizer placed 3 to 5 inches deeper than the seed. The close and deep fertilizer placement with this drill was obtained by shifting and rotating the lead irons on the front supporting frame of the drill.

Check These Features

Each grower should check these important features before purchasing a planter.

1) The fertilizer should be placed 3 inches to the side of the seed with adequate adjustment both vertically and horizontally. This adjustment should allow placement of fertilizer 3 inches to the side and 1 inch to 5 inches deeper than the seed. Our present knowledge indicates that placement either at one or both sides of the seed is acceptable.

2) The fertilizer mechanism should have a positive drive and an accurate metering device so that uniform amounts of fertilizer are applied under all conditions.

3) Best results have been obtained when fertilizer is applied before the seed, in which case the seed is not buried or uncovered by a deep application of fertilizer following the seed shoe. For this reason the fertilizer hopper should be mounted ahead of the seed hopper.

4) The seed metering device should be accurate and with sufficient range of calibration to allow planting any stand of plants desired. In most cases this will mean that a good selection of seeding plates must be available to fit varying sizes and shapes of seed.

5) The planter frame should be sturdy and rigid to withstand the stress of deep fertilizer placement and in supporting large fertilizer hoppers which will facilitate the application of higher amounts of fertilizer.

By insisting on a planter with these important features, we may then plan and fertilize crops according to their nutrient requirements. THE END.

FEBRUARY, 1956

PUBLIC AUCTION

Due to highway conversion will sell all equipment at our farm on Island Road, 1½ miles N.W. of Circleville, Ohio, Saturday, February 18, 1956 at 11:30 A.M. Lunch served.

1950 GMC COE truck with 15' insulated body with new 1955 270 engine and new 825 tires. Oliver Cletrac AG6 crawler tractor. Allis-Chalmers WD tractor with mounted plows. Farmall Super A tractor. Three Allis-Chalmers Model G tractors. Planet, Jr. H.T. tractor. All kinds of tractor seeders, planters, cultivators, side dressers and equipment.

GE 5 H.P. and 3 H.P. freon compressors with motors, and three large bush condensers for 30x60 cold storage. John Bean 50 gal. sprayer with special mounts for G tractor. John Deere subsoiler with moleball, Case 10' fer-

tilizer spreader, power duster, two John Deere 7' discs, new three bottom John Deere plow, dual wheel tilt-top trailer, field trailers, wash shed carts, tanks, New Idea transplanter, Holland transplanter, Gorman Rupp 55M 1000 GPM irrigation pump, Jaeger 5CPH 600 GPM irrigation pump.

750' McDowell 6" aluminum pipe. 730' McDowell 4" aluminum pipe, 1650' Champion 4" aluminum pipe. 35 SAI Skinner sprinklers.

American Specialty bench washer with Royal 20 pump. American Specialty continuous turnip washer with continuous packing table. John Bean brusher. Roller conveyors and other items too numerous to mention.

Inspection prior to sale welcome or call Columbus, Ohio, Broadway 4-0982 evenings.

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with toxic insecticides and fumigants such as Systox, Parathion, TEPP, Aldrin, Chlordane, etc.



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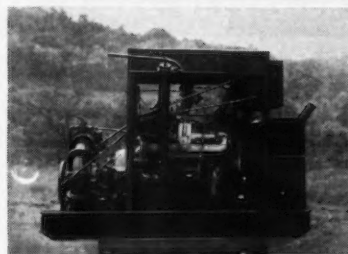
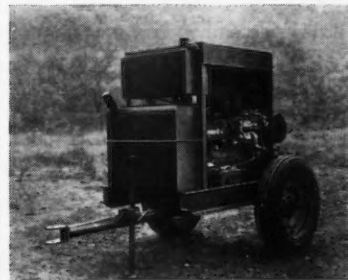
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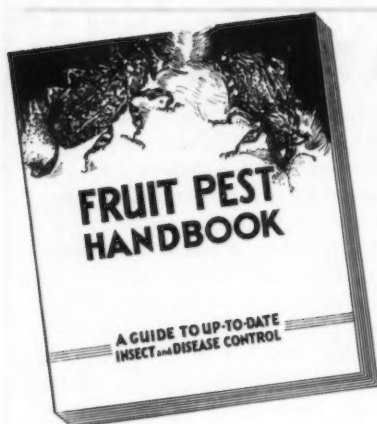


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MISSISSIPPI

(Continued from page 15)

nite shift has occurred in the varieties of melons grown for shipment. At least 75 per cent of the 1955 crop was of the Congo variety with most of the other acreage planted to Black Diamond. Results of trial plantings of the new Charleston Gray variety indicate that many growers will plant a part of their acreage to this variety, but will continue to depend largely on Congo in 1956.

Production of vegetables for processing has expanded to not only meet the requirements for processors within the state, but also for sale to out-of-state processors. At present all of the processing plants within the state are located in the southern part, but limited production of such crops as pimiento pepper, crowder peas, spinach and snap beans has proved successful in the Delta area of North Mississippi. Prospects are bright for the establishment of one or more freezing plants in the near future.

Expert Help

Mississippi vegetable growers are given full co-operation and assistance with their production and marketing problems by the Extension Service and Research staff of Mississippi State College. The county agents in each of the vegetable producing counties provide growers with the latest information on production practices and actively assist with the development of organized marketing programs. Two extension production specialists and two marketing specialists assist the county agents and growers of vegetable crops.

The Mississippi Experiment Station established the Truck Crops Branch Experiment Station at Crystal Springs in 1938. This station has four staff members who conduct research on all phases of vegetable production and also provide free soil testing service. The Kopia variety of tomato was developed and released by this station and the Contender variety of snap bean was released jointly by this station and the U. S. Vegetable Breeding Laboratory. In addition to vegetable research conducted at Crystal Springs, two members of the horticultural staff and one member of the plant pathology staff at State College devote full time to vegetable crops. Other workers at the main station conduct research on vegetable problems, including the breeding for disease-resistant varieties of watermelons, sweetpotatoes and cantaloupes.

Although "King Cotton" will continue to reign in Mississippi for many years to come, there is a definite need

OPPORTUNITY ADS

Only 25c a word for one-time insertion; 20c a word for two-time insertion; 15c a word for four-time insertion—CASH WITH ORDER. Count each initial and whole number as one word. ADDRESS AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

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Plans for a modern, low-cost potato storage are now available to AMERICAN VEGETABLE GROWER readers. The aboveground 50-foot square storage is designed to hold 17,500 bushels. A list of materials is included with the plans. Send remittance of \$1.50 in form of check or money order to AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

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and opportunity for many farmers to further balance and diversify their program by growing other cash crops such as vegetables. With highly favorable climatic and soil conditions, combined with a more plentiful supply of labor due to mechanization, the vegetable industry in Mississippi has excellent possibilities for expansion.

The extent of this expansion will depend to a large extent on the establishment of additional processing facilities within the state. Further expansion will not be limited, however, to canning and freezing outlets, since there is still a big deficit in supplies of fresh vegetables for local and near-by markets. A wide variety of "out-of-season" as well as "in-season" vegetables can be successfully grown and marketed in the state through the expanded development of irrigation, use of adapted varieties and other proven cultural and marketing practices. THE END.

NEMATODES CONTROL INSECT PESTS

NEW ideas in insect control are being developed at the USDA's Agricultural Research Center at Beltsville, Md.

On the Beltsville tour during their recent annual meeting, members of the Vegetable Growers Association of America saw demonstrations of these new control measures which use parasites, predators, diseases, and viruses to keep destructive insects in check.

One method being tested is the use of a specific nematode which has a liking for certain insects but will not attack the plants. The nematode is infected with a bacteria deadly to the insect. The plant is sprayed with a solution containing the infected nematodes. These nematodes in turn infect the insects with the bacteria, causing their quick death.

Such insects as the codling moth, army worm, cabbage worm, Colorado potato beetle, cabbage aphid, and corn ear worm have been controlled in nematode spray tests.

Tomato Juice from Powder

A METHOD of producing high-quality tomato powder in commercial vacuum-drying equipment has been developed by the USDA Agricultural Research Service at Albany, Calif. This is a major step toward commercial manufacture of the powder which, mixed with water, makes a delicious tomato juice. The powder requires no refrigeration and is very light in weight, meaning real savings in transportation and storage costs.

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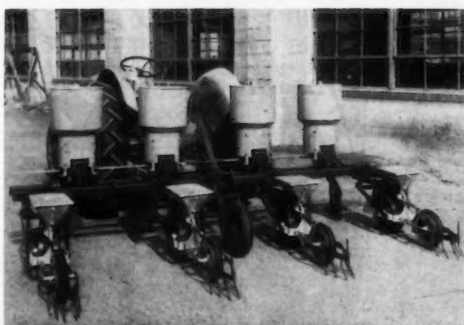
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Our Junior Growers Are on Their Toes

OUR hats are off to the young men and women who took part in the contests held in December by the National Junior Vegetable Growers Association, reported on pages 36 and 37 of this issue.

These annual contests climax a year's activity on the part of thousands of youngsters throughout the country between the ages of 13 and 22. Their work in the NJVGA educational program is carried on under the guidance of state leaders, extension specialists, and county agents. The program consists of projects and activities for youth who have an interest in the culture, marketing, or utilization of horticultural crops.

The records show the winners in December chalked up are noteworthy. They augur well for the future of the youngsters. And no matter which line of endeavor these boys

and girls pursue later in life their understanding of the fundamentals of vegetable production and marketing will directly or indirectly benefit the entire vegetable industry.

The youth program is financed by the NJVGA Foundation which provides an opportunity for business, industry, civic, farm, and service organizations to co-operate in promoting the educational projects of the association. The list of sponsors now totals more than twenty and is constantly growing.

Last year through the co-operation of the National Canners Association a vegetable and fruit canning crops project was added to the NJVGA educational program. This year The Dow Chemical Company is sponsoring a competition emphasizing control of soil-infesting pests by soil fumigation.

A Banker's-Eye View of the Vegetable Grower

IF THERE is one man in your community who it would pay you to know what he thinks of you, it is your banker. Who else has so much to say about your affairs? Who else has the power to decide whether you expand and move ahead or go bust because of lack of capital?

Growers who attended the joint meeting of the New York State Vegetable Growers Association and the Empire State Potato Club in Buffalo last month had the novel—and profitable—experience of looking at themselves through bankers' eyes.

David Nolan, agricultural credit expert from Norwich, N.Y., told them just how a banker looks upon their vegetable operations.

A young man starting out in farming nowadays should ask himself two questions, Nolan said. One is, "Who will lend me \$100,000 to get started?"

Two is, "Why should he?"

He pointed out why the farmer needs a good line of credit. Whereas industry has \$12,000 to \$13,000 invested per worker, the farmer has at least twice as much. He has more money tied up per worker than U.S. Steel. The wise use of credit, Nolan said, is just as important in the farm operation as a good line of machinery or fertilizer.

He emphasized that the grower must have efficient operation if the banker is to renew financing each year, because the margin of profit is so narrow on potatoes and vegetables. He advised growers, "Keep the banker informed of your plans and work with him closely."

It takes a high-quality producer to do a good job of growing a cash crop, he added.

Growers can't bank on help from federal policies and will never get legislation that will take care of the farm problem, Nolan added.

VEGETABLE CONVENTION



"He ought to be handsome—he slides on wax and naps in cellophane."

The time has come, he said, when the old concept of farm ownership has to be revised. Many farmers cannot save enough money in a lifetime to pay for a well-equipped farm. Corporate ownership, which would invite investment capital just as a company like Ford or General Motors does, is much preferable to government ownership.

All in all, what Nolan said is what many others have been saying for a long time—farming is a business, and the sooner we vegetable growers think of ourselves as businessmen, the better off we'll be.

The Aristocrat Needs

To Be Properly Introduced

BIBB lettuce was selling the other day in supermarkets in the Cleveland area at 29 cents a head; iceberg lettuce, two heads for 29 cents; leaf lettuce, 25 cents a bunch. Even at the low selling price of the iceberg lettuce, the manager of the supermarket saw fit to package each head in cellophane. The leaf lettuce was protected with a wrapper. Bibb, the Aristocrat, was "displayed" in a four-quart moisture-discolored splint basket, the delicate heads unwrapped. Yes, you are right—every customer's cart had two heads of iceberg. The Aristocrat went begging.

It seems to us that a more satisfactory and rewarding method of introducing the Aristocrat to the general public is needed. We personally like Bibb very much. We would like to see more people buy it regularly. The average housewife, however, is still unfamiliar with it so naturally isn't favorably inclined toward buying it, particularly when the contrast between prices of varieties is so great. But—were it properly protected and attractively displayed her curiosity and interest would be aroused—perhaps even at 29 cents a head.

It would seem to us too that the Aristocrat should be protected before it reaches retail markets, to safeguard it against the rough handling fresh vegetables receive at the hands of both retail merchants and consumers.

Coming Next Month

- Soil Sterilization
- Prepackaged Produce—A Hit with the Housewife
- How the Metzlers of Illinois Grow Early Tomatoes
- Wild Poke Goes Commercial

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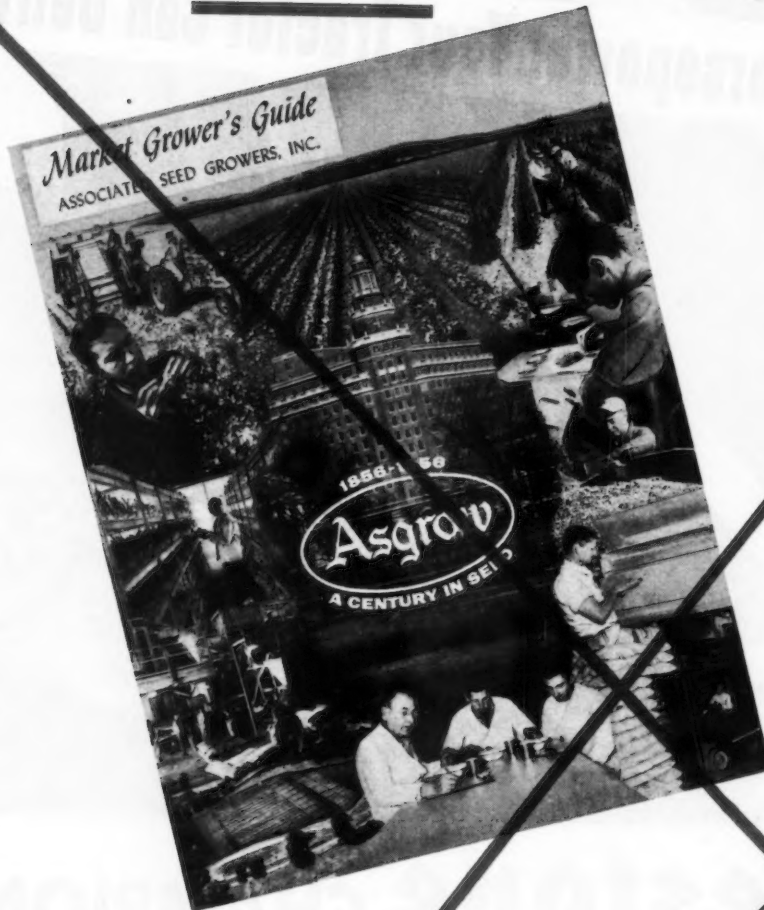
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